

CONTRACT BIDDING DOCUMENTS

FOR

WHITING LANE ELEMENTARY SCHOOL
MAIN ENTRANCE SECURITY
RENOVATIONS

BID # 200042



INFORMATION

WHITING LANE ELEMENTARY SCHOOL MAIN ENTRANCE SECURITY RENOVATIONS

**47 Whiting Lane
West Hartford, CT
BID# 200042**

ARCHITECT

**Bostwick Architects LLC
73 Woodland Road
Rocky Hill, CT 06067**

PROJECT MANAGER

**William S. Phibbs
Capital Projects Manager**

ALL QUESTIONS TO

**Purchasing Services
Rick Hyman, Buyer**

All questions must be submitted in writing and emailed to rick.hyman@westhartfordCT.gov, at least seven calendar days prior to the date established for the opening of bids. Please do not call the Engineer/Architect, Project Manager or Purchasing Office with questions.

00101

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PROJECT NARRATIVE

Whiting Lane Elementary School Main Office Entry Security project includes removal of school main office entry, main vestibule doors, ceilings, lighting flooring and providing new secure entry into school and main office.

LIST OF DRAWINGS

COVER SHEET

CIVIL

NOT APPLICABLE

ARCHITECTURAL

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STRUCTURAL ***NOT APPLICABLE***

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ELECTRICAL

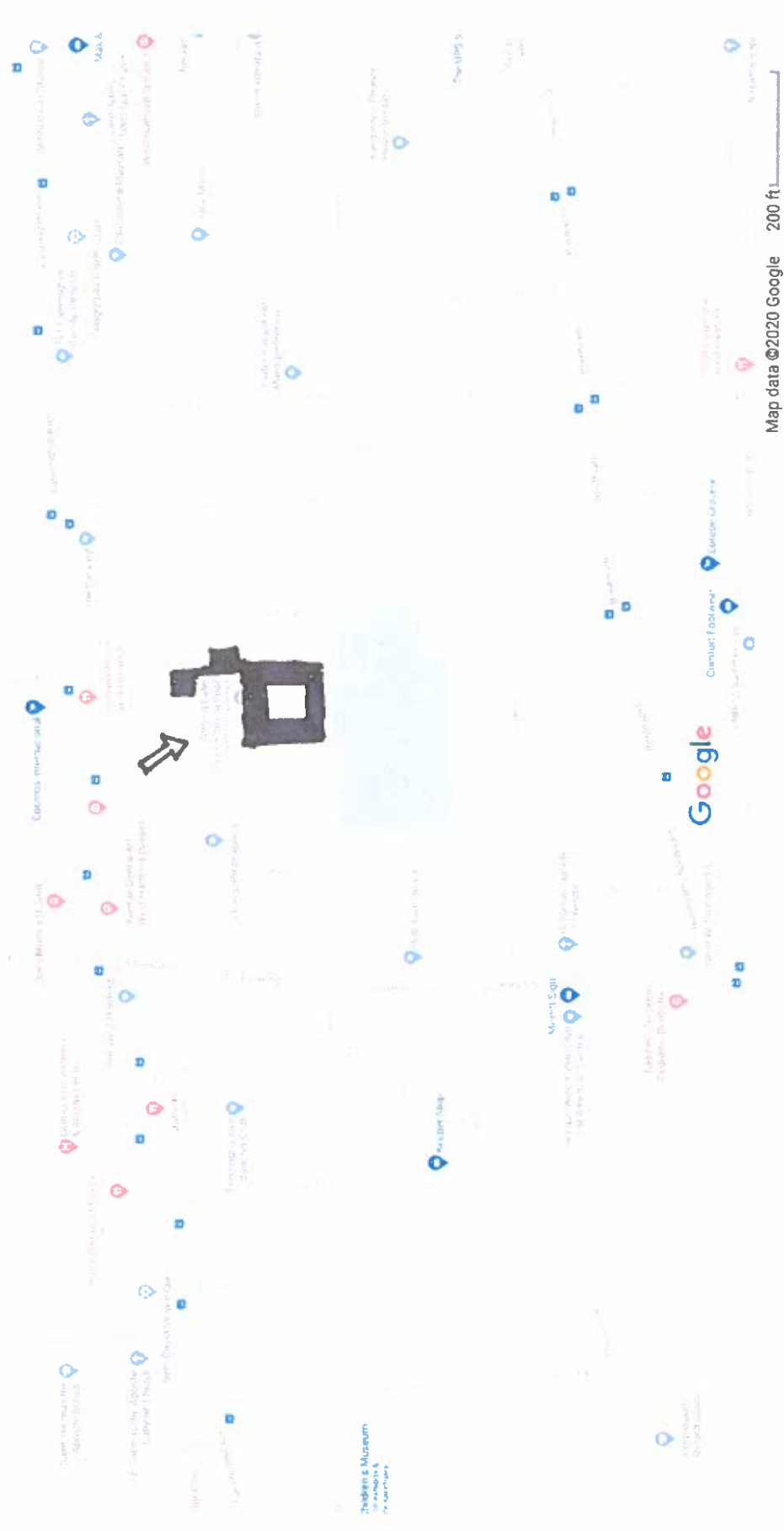
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FIRE PROTECTION

FP – 1.0	FIRE PROTECTION FLOOR PLAN
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LOCATION MAP



General

1. Contractor, Supervisory, and Trades personnel will be required to be familiar with and adhere to the Project Work Rules. Failure to comply with the Work Rules may result in being banned from the project site.
2. The Contractor shall take direction only from the Capital Project Manager or their representative.
3. All construction activities that are disruptive to school operations (due to noise, vibration, dust, orders, etc.) shall occur outside regular school instructional hours.
4. Contractors shall not use Town-owned dumpsters for refuse disposal unless given prior written permission from the Town's capital projects manager.
5. No entry into the building is allowed without prior permission of the Town. When entry is granted each individual must sign in at the main office and obtain a visitor's badge.
6. Have staff available on site to receive and upload your materials whenever deliveries are made. If Contractor staff is not available the delivery will be refused.
7. The Contractor shall maintain, at the site, one copy of the drawings, specifications, addenda, change orders and other modifications, in good order and marked currently; and one copy of approved shop drawings, product data, samples and similar required submittals.
8. Maintain complete files of Material Safety Data Sheets (MSDS) on the jobsite.
9. The Owner does not provide secure storage for the Contractor's materials and tools.

Foreman/Supervisory Personnel

1. The Trade Foreman/Superintendent must be on the jobsite whenever their staff is on site. This includes subcontractor personnel.

All Contractor Personnel

1. Contractors, subcontractors, and all their personnel shall wear a uniform with the company's logo while on site.
2. For individuals working in school buildings or on school sites, the Contractors must conduct a criminal background check. Prior to working in any school building, the Contractor shall provide verification that their employees and subcontractors do not appear on any Sex Offender Registry.
3. Job hours are 7:00 AM to 3:30 PM for first shift and 3:30 PM to 11:00 PM for second shift. Additional time may be subject to custodial overtime charges of approximately \$40.00 per hour.

4. Materials deliveries or movement of construction vehicles is not permitted among buses and students during drop-off of pickup times 8:00-8:45 AM & 3:15-3:45 PM Monday, Tuesday, Thursday, Friday and 1:45-2:15 PM on Wednesday. Times vary among elementary, middle and high school and will be confirmed with the Contractor.
5. No alcohol or controlled substances are allowed on the school property.
6. No smoking is allowed within the building or on the school property.
7. No food is to be eaten in the building. All food-related trash is to be removed from the site at the end of each day.
8. Use of radios and other amplified sound systems is disruptive to building occupants and is not permitted during classroom instructional hours.
9. Clean up all work areas daily. Keep the job clean and debris free.
10. Coordinate your work with the work of other trades. Check preceding work prior to starting new work. Do not proceed unless preceding work is completely acceptable.
11. Protect your work at all times from damage.
12. Park in designated areas only. Keep parking areas accessible for emergency vehicles. Privately owned vehicles are not permitted in areas of construction.
13. Passenger elevators are not to be used by Contractors for transporting materials.

Safety

1. All work activities are to be planned with Safety as the #1 priority.
2. A copy of the Contractor's safety program shall be present at job site.
3. A first aid kit appropriate to the size of the work crew is to be provided by the Contractor
4. Appropriate fire extinguishing supplied by the Contractor shall be present at the work area.
5. All personnel in work areas will have, at a minimum, hard hats, safety glasses, work shoes, shirts with sleeves, and long pants. Hard hats have to have company and employees name.
6. No interruption of building services (e.g. power, water, fire alarm intercom, ventilation, heating, cooling, etc.) without prior coordination with, and permission from, the Owner.
7. No use of any tools, equipment or supplies, other than those supplied by the Contractor.

- L.** Noise created as a result of or relating to an emergency.
- M.** Noise generated by construction activity shall be exempted between the hours of 7:00 a.m. to one hour after sundown, Monday through Saturday.
- N.** Noise created by blasting other than that conducted in connection with construction activities shall be exempted, provided that the blasting is conducted between 8:00 a.m. and 5:00 p.m. local time at specified hours previously announced to the local public or provided that a permit for such blasting has been obtained from local authorities.
- O.** Noise created by on-site recreational or sporting activity which is sanctioned by the state or local government, provided that noise discharged from exhausts is adequately muffled to prevent loud and/or explosive noises therefrom.
- P.** Patriotic or public celebrations not extending longer than one calendar day.
- Q.** Noise created by aircraft.
- R.** Noise created by products undergoing test, where one of the primary purposes of the test is the evaluation of product noise characteristics and where practical noise control measures have been taken.
- S.** Noise generated by transmission facilities, distribution facilities and substations of public utilities providing electrical powers, telephone, cable television or other similar services and located on property which is not owned by the public utility and which may or may not be within utility easements.

TO ALL VENDORS DOING BUSINESS WITH WEST HARTFORD.

Please register in our new vendor self service center

Benefits to vendors include:

1. Notification of upcoming bids
2. Ability to see Purchase Orders and Contracts
3. Information regarding payments to you
4. The ability to update your company's information such as phone number and emails
5. The ability to provide us with all of the commodity codes for your company.

Please go to the following site

<https://selfservice.westhartfordct.gov/MSS/Vendors/default.aspx>

Create a user name and password for your company. Password must be at least 8 characters and contain a Capital and a lower case letter, a number and a symbol.

At the bottom of the page, fill in your vendor number (created by West Hartford) and your tax ID.

Your vendor number is printed on your check above your company name

Continue filling in required information. **Do not forget to choose commodity codes. These codes can be found under vendor information. We will notify you of upcoming bids by the codes that you have picked.**

In addition, please download a W9 from the resources icon on the upper right hand side of the page. Then scan and add it to the attachments under vendor information.

Please call 860-561-7471 if you have any questions.

Once registered, click on bids. To see bids "Accepting Proposals", click on status to sort. Any questions regarding bids please email rick.hyman@westhartfordct.gov.

Thank you.

INVITATION TO BID

Sealed Bid Submissions marked **“WHITING LANE ELEMENTARY SCHOOL MAIN ENTRANCE SECURITY RENOVATION BID# 200042”** will be received at the office of the Purchasing Division, Room 223, Town Hall, 50 South Main Street, West Hartford, Connecticut until **3:00 PM on June 18, 2020** at which time they will be publicly* opened and read.

Plans and specifications are available for downloading at www.westhartfordct.gov/bids. Any questions concerning this request for bid shall be addressed to the Purchasing Agent at the address above.

A pre-bid conference will be held on **June 10, 2020 at 11:30 AM** at **WHITING LANE E.S. 47 Whiting Lane, West Hartford, CT**, at which time questions concerning the project will be answered. Prospective bidders are expected to attend the pre-bid meeting as this will be the only opportunity to verbalize questions relative to this project and view the job site with the Town's project team. We will follow social distancing guidelines.

All Bidders must file with their bid a bid bond, certified or treasurer's check in the amount of 10% of the total of the base bid made payable to the Town of West Hartford.

Performance and Labor and Material Payment bonds in the amount of 100% of the contract price will be required of the successful bidder if the contract pursuant to this request for bids exceeds \$50,000.00.

No bid may be withdrawn for a period of ninety (90) days after the opening of bids without the approval and written consent of the Town of West Hartford.

The right is reserved to reject any and all bids, to waive any informalities in the bidding and to make awards in any manner that is the most beneficial to the Town.

*Bidders are encouraged to attend the Town's bid opening at which time the public is afforded an opportunity to record bid prices received in response to the Town's solicitation. Bidders who would like the results of the bid but are unable to attend the bid opening, may check the Town website, www.westhartfordct.gov/gov/departments/purchasing/bid_results a week after the bid opening date. Bidders calling the Purchasing Office for bid results will be referred to the above procedure.

*Due to COVID19, the Town Hall has restricted entry. For this bid, we are allowing for electronic submission along with hard copy submission. All participants must submit both. Hard copy must match electronic submission, the Town maintains the right to reject any bid that does not meet this criteria. Hard copies are to be received in the purchasing office no later than ***12:00 noon on June 23, 2020***. They can be mailed or delivered. If delivered, the Town Hall has a number posted at its entry to call for receipt.

Electronic submissions are still required by ***June 18, 2020 at 3:00PM***. In order to provide an electronic submission you must be registered in our vendor database. Please see the vendor registration instructions. Once registered, you will gain access to the bid and the bid documents. Please follow the prompts when submitting your price structures. If you have questions regarding electronic submission, please do not hesitate to contact Rick Hyman via email at rick.hyman@westhartfordct.gov.

TOWN OF WEST HARTFORD
PETER PRIVITERA
PURCHASING AGENT

00201-1

AIA® Document A701™ – 2018

Instructions to Bidders

for the following Project:

(Name, location, and detailed description)

BID# 200042 Whiting Lane Elementary School Main Entrance Security Renovation
47 Whiting Lane
West Hartford, CT

THE OWNER:

(Name, legal status, address, and other information)

Town of West Hartford
50 South Main Street
West Hartford, CT 06107

THE ARCHITECT:

(Name, legal status, address, and other information)

Bostwick Architects LLC
73 Woodland Road
Rocky Hill, CT 06067

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7	PERFORMANCE BOND AND PAYMENT BOND
8	ENUMERATION OF THE PROPOSED CONTRACT DOCUMENTS

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

FEDERAL, STATE, AND LOCAL LAWS MAY IMPOSE REQUIREMENTS ON PUBLIC PROCUREMENT CONTRACTS. CONSULT LOCAL AUTHORITIES OR AN ATTORNEY TO VERIFY REQUIREMENTS APPLICABLE TO THIS PROCUREMENT BEFORE COMPLETING THIS FORM.

It is intended that AIA Document G612™–2017, Owner's Instructions to the Architect, Parts A and B will be completed prior to using this document.

ARTICLE 1 DEFINITIONS

§ 1.1 Bidding Documents include the Bidding Requirements and the Proposed Contract Documents. The Bidding Requirements consist of the advertisement or invitation to bid, Instructions to Bidders, supplementary instructions to bidders, the bid form, and any other bidding forms. The Proposed Contract Documents consist of the unexecuted form of Agreement between the Owner and Contractor and that Agreement's Exhibits, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, all Addenda, and all other documents enumerated in Article 8 of these Instructions.

§ 1.2 Definitions set forth in the General Conditions of the Contract for Construction, or in other Proposed Contract Documents apply to the Bidding Documents.

§ 1.3 Addenda are written or graphic instruments issued by the Architect, which, by additions, deletions, clarifications, or corrections, modify or interpret the Bidding Documents.

§ 1.4 A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.

§ 1.5 The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents, to which Work may be added or deleted by sums stated in Alternate Bids.

§ 1.6 An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from, or that does not change, the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

§ 1.7 A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, as described in the Bidding Documents.

§ 1.8 A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents.

§ 1.9 A Sub-bidder is a person or entity who submits a bid to a Bidder for materials, equipment, or labor for a portion of the Work.

ARTICLE 2 BIDDER'S REPRESENTATIONS

§ 2.1 By submitting a Bid, the Bidder represents that:

- .1 the Bidder has read and understands the Bidding Documents;
- .2 the Bidder understands how the Bidding Documents relate to other portions of the Project, if any, being bid concurrently or presently under construction;
- .3 the Bid complies with the Bidding Documents;
- .4 the Bidder has visited the site, become familiar with local conditions under which the Work is to be performed, and has correlated the Bidder's observations with the requirements of the Proposed Contract Documents;
- .5 the Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception; and
- .6 the Bidder has read and understands the provisions for liquidated damages, if any, set forth in the form of Agreement between the Owner and Contractor.

ARTICLE 3 BIDDING DOCUMENTS

§ 3.1 Distribution

§ 3.1.1 Bidders shall obtain complete Bidding Documents, as indicated below, from the issuing office designated in the advertisement or invitation to bid, for the deposit sum, if any, stated therein.

(Indicate how, such as by email, website, host site/platform, paper copy, or other method Bidders shall obtain Bidding Documents.)

§ 3.1.2 Any required deposit shall be refunded to Bidders who submit a bona fide Bid and return the paper Bidding Documents in good condition within ten days after receipt of Bids. The cost to replace missing or damaged paper documents will be deducted from the deposit. A Bidder receiving a Contract award may retain the paper Bidding Documents, and the Bidder's deposit will be refunded.

§ 3.1.3 Bidding Documents will not be issued directly to Sub-bidders unless specifically offered in the advertisement or invitation to bid, or in supplementary instructions to bidders.

§ 3.1.4 Bidders shall use complete Bidding Documents in preparing Bids. Neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete Bidding Documents.

§ 3.1.5 The Bidding Documents will be available for the sole purpose of obtaining Bids on the Work. No license or grant of use is conferred by distribution of the Bidding Documents.

§ 3.2 Modification or Interpretation of Bidding Documents

§ 3.2.1 The Bidder shall carefully study the Bidding Documents, shall examine the site and local conditions, and shall notify the Architect of errors, inconsistencies, or ambiguities discovered and request clarification or interpretation pursuant to Section 3.2.2.

§ 3.2.2 Requests for clarification or interpretation of the Bidding Documents shall be submitted by the Bidder in writing and shall be received by the Architect at least seven days prior to the date for receipt of Bids.

(Indicate how, such as by email, website, host site/platform, paper copy, or other method Bidders shall submit requests for clarification and interpretation.)

§ 3.2.3 Modifications and interpretations of the Bidding Documents shall be made by Addendum. Modifications and interpretations of the Bidding Documents made in any other manner shall not be binding, and Bidders shall not rely upon them.

§ 3.3 Substitutions

§ 3.3.1 The materials, products, and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance, and quality to be met by any proposed substitution.

§ 3.3.2 Substitution Process

§ 3.3.2.1 Written requests for substitutions shall be received by the Architect at least ten days prior to the date for receipt of Bids. Requests shall be submitted in the same manner as that established for submitting clarifications and interpretations in Section 3.2.2.

§ 3.3.2.2 Bidders shall submit substitution requests on a Substitution Request Form if one is provided in the Bidding Documents.

§ 3.3.2.3 If a Substitution Request Form is not provided, requests shall include (1) the name of the material or equipment specified in the Bidding Documents; (2) the reason for the requested substitution; (3) a complete description of the proposed substitution including the name of the material or equipment proposed as the substitute, performance and test data, and relevant drawings; and (4) any other information necessary for an evaluation. The request shall include a statement setting forth changes in other materials, equipment, or other portions of the Work, including changes in the work of other contracts or the impact on any Project Certifications (such as LEED), that will result from incorporation of the proposed substitution.

§ 3.3.3 The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final.

§ 3.3.4 If the Architect approves a proposed substitution prior to receipt of Bids, such approval shall be set forth in an Addendum. Approvals made in any other manner shall not be binding, and Bidders shall not rely upon them.

§ 3.3.5 No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.

§ 3.4 Addenda

§ 3.4.1 Addenda will be transmitted to Bidders known by the issuing office to have received complete Bidding Documents.

(Indicate how, such as by email, website, host site/platform, paper copy, or other method Addenda will be transmitted.)

§ 3.4.2 Addenda will be available where Bidding Documents are on file.

§ 3.4.3 Addenda will be issued no later than four days prior to the date for receipt of Bids, except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids.

§ 3.4.4 Prior to submitting a Bid, each Bidder shall ascertain that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.

ARTICLE 4 BIDDING PROCEDURES

§ 4.1 Preparation of Bids

§ 4.1.1 Bids shall be submitted on the forms included with or identified in the Bidding Documents.

§ 4.1.2 All blanks on the bid form shall be legibly executed. Paper bid forms shall be executed in a non-erasable medium.

§ 4.1.3 Sums shall be expressed in both words and numbers, unless noted otherwise on the bid form. In case of discrepancy, the amount entered in words shall govern.

§ 4.1.4 Edits to entries made on paper bid forms must be initialed by the signer of the Bid.

§ 4.1.5 All requested Alternates shall be bid. If no change in the Base Bid is required, enter "No Change" or as required by the bid form.

§ 4.1.6 Where two or more Bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of the bid security, state the Bidder's refusal to accept award of less than the combination of Bids stipulated by the Bidder. The Bidder shall neither make additional stipulations on the bid form nor qualify the Bid in any other manner.

§ 4.1.7 Each copy of the Bid shall state the legal name and legal status of the Bidder. As part of the documentation submitted with the Bid, the Bidder shall provide evidence of its legal authority to perform the Work in the jurisdiction where the Project is located. Each copy of the Bid shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further name the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached, certifying the agent's authority to bind the Bidder.

§ 4.1.8 A Bidder shall incur all costs associated with the preparation of its Bid.

§ 4.2 Bid Security

§ 4.2.1 Each Bid shall be accompanied by the following bid security:

(Insert the form and amount of bid security.)

§ 4.2.2 The Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bid and shall, if required, furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds if required, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty. In the event the Owner fails to comply with Section 6.2, the amount of the bid security shall not be forfeited to the Owner.

§ 4.2.3 If a surety bond is required as bid security, it shall be written on AIA Document A310™, Bid Bond, unless otherwise provided in the Bidding Documents. The attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of an acceptable power of attorney. The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 4.2.4 The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until (a) the Contract has been executed and bonds, if required, have been furnished; (b) the specified time has elapsed so that Bids may be withdrawn; or (c) all Bids have been rejected. However, if no Contract has been awarded or a Bidder has not been notified of the acceptance of its Bid, a Bidder may, beginning days after the opening of Bids, withdraw its Bid and request the return of its bid security.

§ 4.3 Submission of Bids

§ 4.3.1 A Bidder shall submit its Bid as indicated below:

(Indicate how, such as by website, host site/platform, paper copy, or other method Bidders shall submit their Bid.)

§ 4.3.2 Paper copies of the Bid, the bid security, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the party receiving the Bids and shall be identified with the Project name, the Bidder's name and address, and, if applicable, the designated portion of the Work for which the Bid is submitted. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.

§ 4.3.3 Bids shall be submitted by the date and time and at the place indicated in the invitation to bid. Bids submitted after the date and time for receipt of Bids, or at an incorrect place, will not be accepted.

§ 4.3.4 The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

§ 4.3.5 A Bid submitted by any method other than as provided in this Section 4.3 will not be accepted.

§ 4.4 Modification or Withdrawal of Bid

§ 4.4.1 Prior to the date and time designated for receipt of Bids, a Bidder may submit a new Bid to replace a Bid previously submitted, or withdraw its Bid entirely, by notice to the party designated to receive the Bids. Such notice shall be received and duly recorded by the receiving party on or before the date and time set for receipt of Bids. The receiving party shall verify that replaced or withdrawn Bids are removed from the other submitted Bids and not considered. Notice of submission of a replacement Bid or withdrawal of a Bid shall be worded so as not to reveal the amount of the original Bid.

§ 4.4.2 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids in the same format as that established in Section 4.3, provided they fully conform with these Instructions to Bidders. Bid security shall be in an amount sufficient for the Bid as resubmitted.

§ 4.4.3 After the date and time designated for receipt of Bids, a Bidder who discovers that it made a clerical error in its Bid shall notify the Architect of such error within two days, or pursuant to a timeframe specified by the law of the jurisdiction where the Project is located, requesting withdrawal of its Bid. Upon providing evidence of such error to the reasonable satisfaction of the Architect, the Bid shall be withdrawn and not resubmitted. If a Bid is withdrawn pursuant to this Section 4.4.3, the bid security will be attended to as follows:

(State the terms and conditions, such as Bid rank, for returning or retaining the bid security.)

ARTICLE 5 CONSIDERATION OF BIDS

§ 5.1 Opening of Bids

If stipulated in an advertisement or invitation to bid, or when otherwise required by law, Bids properly identified and received within the specified time limits will be publicly opened and read aloud. A summary of the Bids may be made available to Bidders.

§ 5.2 Rejection of Bids

Unless otherwise prohibited by law, the Owner shall have the right to reject any or all Bids.

§ 5.3 Acceptance of Bid (Award)

§ 5.3.1 It is the intent of the Owner to award a Contract to the lowest responsive and responsible Bidder, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents. Unless otherwise prohibited by law, the Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's best interests.

§ 5.3.2 Unless otherwise prohibited by law, the Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the lowest responsive and responsible Bidder on the basis of the sum of the Base Bid and Alternates accepted.

ARTICLE 6 POST-BID INFORMATION

§ 6.1 Contractor's Qualification Statement

Bidders to whom award of a Contract is under consideration shall submit to the Architect, upon request and within the timeframe specified by the Architect, a properly executed AIA Document A305™, Contractor's Qualification Statement, unless such a Statement has been previously required and submitted for this Bid.

§ 6.2 Owner's Financial Capability

A Bidder to whom award of a Contract is under consideration may request in writing, fourteen days prior to the expiration of the time for withdrawal of Bids, that the Owner furnish to the Bidder reasonable evidence that financial arrangements have been made to fulfill the Owner's obligations under the Contract. The Owner shall then furnish such reasonable evidence to the Bidder no later than seven days prior to the expiration of the time for withdrawal of Bids. Unless such reasonable evidence is furnished within the allotted time, the Bidder will not be required to execute the Agreement between the Owner and Contractor.

§ 6.3 Submittals

§ 6.3.1 After notification of selection for the award of the Contract, the Bidder shall, as soon as practicable or as stipulated in the Bidding Documents, submit in writing to the Owner through the Architect:

- .1 a designation of the Work to be performed with the Bidder's own forces;
- .2 names of the principal products and systems proposed for the Work and the manufacturers and suppliers of each; and
- .3 names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.

§ 6.3.2 The Bidder will be required to establish to the satisfaction of the Architect and Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.

§ 6.3.3 Prior to the execution of the Contract, the Architect will notify the Bidder if either the Owner or Architect, after due investigation, has reasonable objection to a person or entity proposed by the Bidder. If the Owner or Architect has reasonable objection to a proposed person or entity, the Bidder may, at the Bidder's option, withdraw the Bid or submit an acceptable substitute person or entity. The Bidder may also submit any required adjustment in the Base Bid or Alternate Bid to account for the difference in cost occasioned by such substitution. The Owner may accept the adjusted bid price or disqualify the Bidder. In the event of either withdrawal or disqualification, bid security will not be forfeited.

§ 6.3.4 Persons and entities proposed by the Bidder and to whom the Owner and Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner and Architect.

ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND

§ 7.1 Bond Requirements

§ 7.1.1 If stipulated in the Bidding Documents, the Bidder shall furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder.

§ 7.1.2 If the furnishing of such bonds is stipulated in the Bidding Documents, the cost shall be included in the Bid. If the furnishing of such bonds is required after receipt of bids and before execution of the Contract, the cost of such bonds shall be added to the Bid in determining the Contract Sum.

§ 7.1.3 The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 7.1.4 Unless otherwise indicated below, the Penal Sum of the Payment and Performance Bonds shall be the amount of the Contract Sum.

(If Payment or Performance Bonds are to be in an amount other than 100% of the Contract Sum, indicate the dollar amount or percentage of the Contract Sum.)

§ 7.2 Time of Delivery and Form of Bonds

§ 7.2.1 The Bidder shall deliver the required bonds to the Owner not later than three days following the date of execution of the Contract. If the Work is to commence sooner in response to a letter of intent, the Bidder shall, prior to commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished and delivered in accordance with this Section 7.2.1.

§ 7.2.2 Unless otherwise provided, the bonds shall be written on AIA Document A312, Performance Bond and Payment Bond.

§ 7.2.3 The bonds shall be dated on or after the date of the Contract.

§ 7.2.4 The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix to the bond a certified and current copy of the power of attorney.

ARTICLE 8 ENUMERATION OF THE PROPOSED CONTRACT DOCUMENTS

§ 8.1 Copies of the proposed Contract Documents have been made available to the Bidder and consist of the following documents:

- .1 AIA Document A101™-2017, Standard Form of Agreement Between Owner and Contractor, unless otherwise stated below.
(Insert the complete AIA Document number, including year, and Document title.)
- .2 AIA Document A101™-2017, Exhibit A, Insurance and Bonds, unless otherwise stated below.
(Insert the complete AIA Document number, including year, and Document title.)
- .3 AIA Document A201™-2017, General Conditions of the Contract for Construction, unless otherwise stated below.
(Insert the complete AIA Document number, including year, and Document title.)
- .4 AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:
(Insert the date of the E203-2013.)
- .5 Drawings

Number	Title	Date
.6	Specifications	

Section	Title	Date	Pages
.7	Addenda:		

Number	Date	Pages
.8	Other Exhibits: <i>(Check all boxes that apply and include appropriate information identifying the exhibit where required.)</i>	
<input type="checkbox"/>	AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below: <i>(Insert the date of the E204-2017.)</i>	
<input type="checkbox"/>	The Sustainability Plan:	
	Title	Date Pages
<input type="checkbox"/>	Supplementary and other Conditions of the Contract:	
	Document	Title Date Pages

.9 Other documents listed below:
(List here any additional documents that are intended to form part of the Proposed Contract Documents.)

INSTRUCTIONS TO BIDDERS

AIA Document A701, "Instructions to Bidders", 2018 Edition, American Institute of Architects, Articles 1 through 8, are bound herein and are hereby made a part of the Contract Documents, and shall apply to all Contractors and Subcontractors.

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

Certain Articles of the AIA Instructions to Bidders are revised or replaced by requirements of the Supplementary Instructions, listed below. Such revisions are replacements and shall take precedence over the AIA Instructions to Bidders.

The Following Articles, revised paragraphs, and clauses have the same numerical designations occurring in the AIA Instructions to Bidders, and all additions follow in direct numbered sequence.

Article 1 - Definition

- 1.3 Delete paragraph 1.3 in its' entirety and substitute the following: Addenda are written or graphic instruments issued by the Architect and distributed by the Owner prior to the bid opening which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.

Article 2 - Bidder's Representation

Add the following as paragraphs 2.2 and 2.3

- 2.2 A pre-bid conference may be held prior to bidding, at which time all interested parties are requested to attend. The intent of the project and Bidding Documents will be discussed. There will be a question and answer period, during which time prospective bidders are invited to request clarification or interpretation of any and all parts of the Bidding Documents. See Invitation to Bid for date, time, and location of Conference.
- 2.3 Guided tours of the Project Site, at the discretion of the owner, may be conducted prior to the pre-bid conference. Questions and or requests for clarification will not be addressed while the tour is being conducted.

ARTICLE 3 - BIDDING DOCUMENTS

- 3.1.1: Delete second sentence and substitute with the following:
Refer to instructions on Invitation to Bid Page 00201-1.

00203-1

- 3.1.2: Delete Paragraph 3.1.2.

3.2.2: Delete the word "Architect" and substitute the word "Owner".

3.3.4: Delete paragraph 3.3.4 in its entirety and substitute with the following:

After the award of the Contract, no substitutions will be considered for the brands specified, except upon written request of the Contractor and written approval by the Architect and Owner. Substitutions shall be submitted in accordance with the requirements listed in Article 3.3.2.

3.3.5: Delete paragraph 3.3.5 in its entirety and substitute with the following:

Approval by the Owner and the Architect of any such substitution shall not relieve the Contractor requesting the substitution of any responsibility for additional costs incurred by other trades for changes made necessary to accommodate the substituted item.

3.4.1: Delete paragraph 3.4.1 in its entirety and substitute with the following:

Addenda will be issued by the Owner and will be mailed to all who are known by the Owner to have received a completed set of Bidding Documents.

ARTICLE 4 - BIDDING PROCEDURES

4.1.6: Add the following words to the beginning of paragraph - "Unless otherwise provided in the Contract Bidding Documents".

4.1.7: Delete paragraph 4.1.7 in its entirety and substitute with the following:

Each copy of the Bid shall include the legal name of the bidder and a statement that the Bidder is a sole proprietor, partnership, corporation or other legal entity. Each copy shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further give the state of incorporation and, if the Owner so requests, have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder.

4.2.3: Delete paragraph 4.2.3 in its entirety and substitute with the following:

Surety Bonds shall be written on forms substantially similar in content to AIA Document A310, and executed by a company authorized to transact business within the State of Connecticut, and the attorney-in-fact who executes the Bond on behalf of the Surety shall affix to the Bond a certified and current copy of his power of attorney.

ARTICLE 5 - CONSIDERATION OF BID

5.1.1: Add new paragraph 5.1.1 as follows:

Bidders are encouraged to attend the Town's bid opening at which time the public is afforded an opportunity to record bid prices received in response to the Town's solicitation. Bidders who would like the results of the bid but are unable to attend the bid opening must submit with their bid a self-addressed stamped envelope and note requesting a copy of the bid results. **BIDDERS CALLING THE PURCHASING OFFICE FOR BID RESULTS WILL BE REFERRED TO THE ABOVE PROCEDURE.**

5.3.1: Delete 1st sentence and substitute the following:

It is the intent of the Owner to award a Contract to the bidder providing the best value to the Owner and is in accordance with requirements of the Bidding Documents and does not exceed the funds available.

5.3.3: Add new paragraph 5.3.3 as follows:

The Owner in awarding the Contract shall be guided by pertinent provisions of the "Town Charter" and "Code of Ordinances".

5.3.4: Add new paragraph 5.3.4 as follows:

A Bid may be rejected if the Bidder cannot show that he has the necessary supervisory staff, labor, capital, materials, machinery and resources to commence the work at the time prescribed and thereafter to prosecute and complete the Work at the rate or time specified; and that he is not already obligated for other work which would delay the commencement, prosecution, or completion of this work. A Bid may also be rejected if the bidder has previously failed to complete a contract within the time required, had previously performed similar work in an unsatisfactory manner, or in the judgment of the Owner is deemed unable to satisfactorily perform the Work.

5.3.5: Add new paragraph 5.3.5 as follows:

Prior to the award of a Contract, if so requested, Bidders must present satisfactory evidence that they have been regularly engaged in the business of doing such Work as they propose to execute and that they are prepared with the necessary supervisory staff, labor, capital, materials, and machinery, resources and responsibilities to conduct and complete the work to be contracted for in accordance with the Contract Documents and to begin it promptly when ordered.

00203-3

ARTICLE 6 - POST BID INFORMATION

6.3.3: Delete paragraph 6.3.3 in its entirety and substitute with the following:

Prior to the award of the Contract, the Owner will notify the Bidder in writing if either the Owner or the Architect, after due investigation, has a reasonable objection to any such proposed person or entity. If the Owner or Architect has reasonable objection to any such proposed person or entity, the Bidder may, at his option, (1) withdraw his Bid, or (2) submit an acceptable substitute person or entity. In the event of withdrawal under this sub-paragraph, Bid Security will not be forfeited, notwithstanding the provisions of Paragraph 4.4.1.

ARTICLE 7 - PERFORMANCE BOND AND PAYMENT BOND

7.1.1: Delete paragraph 7.1.1 in its entirety and substitute with the following:

If the amount of the Contract to be awarded is Fifty Thousand Dollars (\$50,000) or more, the successful Contract Bidder shall furnish and pay for Surety in the full amount of the Contract. This Bond shall provide 100% security for faithful performance and for payment of all persons performing labor or furnishing materials in connection with this Contract and shall be executed by a company authorized to transact business within the State of Connecticut.

The Contractor shall increase the principal amount of the performance and labor and materials payments bond(s) in direct proportion to any increase in the value of the Contract resulting from such change orders.

7.2.1: Delete paragraph 7.2.1 and substitute the following:

The Bidder shall deliver the required bonds to the Owner prior to execution of a contract and not later than (5) five days from notice of the Owner's intent to award the Contract to the bidder.

ARTICLE 9 - SUPPLEMENTARY INSTRUCTIONS

9.1: Add new paragraph 9.1 as follows:

- 9.1.1 - The Contractor shall agree that, except in the case of bona fide occupational qualification or need, neither he nor his Subcontractors and/or agents will refuse to hire or employ, or will bar or discharge from employment, or will otherwise discriminate against any individual in compensation or in terms, conditions, or privileges of employment because of race, color, national origin, ancestry, present or past history of mental disorder, mental retardation, or physical disability, including, but not limited to, blindness.

9.1.2 - The Contractor shall further agree that neither he nor his subcontractors and/or agents will discharge, expel, or otherwise discriminate against any person because he/she has opposed any discriminatory employment practice or because he has filed a complaint or testified or assisted in any proceeding under Connecticut General Statutes Sections 46a-82, 46a-83, or 46a-84 or as may be amended.

9.1.3 - The Contractor shall further agree that, except in the case of a bona fide occupational qualification or need, neither he nor his subcontractors and/or agents will advertise employment opportunities in such manner as to restrict such employment so as to discriminate against individuals because of their race, color, religious creed, age, sex, marital status, national origin, ancestry, present or past history of mental disorder, mental retardation or physical disability, including, but not limited to, blindness.

9.1.4 - The terms used in paragraphs 9.1.1, 9.1.2, and 9.1.3 shall have the definitions set forth in Connecticut General Statutes Section 46a-51 or as may be amended.

9.1.5 - The Contractor further agrees, for himself, his subcontractors, and agents, not to otherwise discriminate or permit discrimination against any person or group of persons on the grounds of race, color, religious creed, age, sex, marital status, national origin, ancestry, present or past history of mental disorder, mental retardation or physical disability (including but not limited to blindness) in any manner prohibited by the laws and regulations of the United States, State of Connecticut or Town of West Hartford.

9.2: Add new paragraph 9.2 as follows:

Time: The Contractor to whom this Contract may be awarded, will be required to commence work at the site within ten (10) days of Contract signing unless, otherwise indicated in the sample AIA Standard Form of Agreement Form A101. The work shall be executed diligently thereafter and shall be completed in accordance with the Contract Documents.

9.3: Add new paragraph 9.3 as follows:

The Bidder is directed to the Bid Forms for additional information, instructions, qualifications and requirements.

END OF SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

(Section updated 3/20)

Bid of _____, BIDDER,
(Name of Bidder)

FOR **"WHITING LANE ELEMENTARY SCHOOL MAIN ENTRANCE SECURITY RENOVATION BID# 200042"** FOR THE TOWN OF WEST HARTFORD, CONNECTICUT.

To: Town of West Hartford
Peter Privitera, Purchasing Agent
Purchasing Services

The undersigned proposes to furnish all labor, materials and equipment, and to perform all work described in the Contract Bidding Documents for **"WHITING LANE ELEMENTARY SCHOOL MAIN ENTRANCE SECURITY RENOVATION BID# 200042"** in accordance with the Contract Bidding Documents for the amounts shown herein under Schedule of Bids.

Receipt acknowledged of the following addenda:

Addendum No. _____	Dated _____
Addendum No. _____	Dated _____
Addendum No. _____	Dated _____
Addendum No. _____	Dated _____
Addendum No. _____	Dated _____
Addendum No. _____	Dated _____

It is understood and agreed that the Owner has the privilege of rejecting any or all Bids and of waiving informality in any Bid.

It is further understood and agreed that this Bid shall be irrevocable for ninety (90) calendar days after Bid receipt date.

SCHEDULE OF BIDS

1. Base Bid No. 1 for furnishing all labor, materials, equipment and all else whatsoever necessary to perform all work described in the Contract Bidding Documents for **“WHITING LANE ELEMENTARY SCHOOL MAIN ENTRANCE SECURITY RENOVATION BID# 200042”** for the lump sum of _____

_____ Dollars (\$_____)

CONTRACT TIME

The undersigned Bidder will accomplish all Work required by the Contract Bidding Documents and will provide Substantial completion by **August 21, 2020**, and will provide the Project, ready for Final Completion, by **August 28, 2020**.

BIDDER QUALIFICATIONS

A: If the Bidder is a Corporation, fill out:

The Bidder is a Corporation, organized under the laws of _____, having its principal office at _____. The Principal officers of said Corporation, with their titles and addresses, are as follows:

All persons interested in the Bid as principals are to be named above.

B. Bid must be accompanied by either a certified check, treasurer's check or a Bid Bond, as provided in the Invitation to Bid. If a check is enclosed herein, fill out the following:

_____ (Name of Bank)	_____ (Address of Bank)	_____ (Amount of Check)
-------------------------	----------------------------	----------------------------

C. Attached hereto are two forms entitled "Summary of Work History". The Bidder is required to complete Form 1 and 2.

- D. The Bidder is required to submit a Certificate of Insurance in amounts and types specified in Insurance Exhibit or provide a letter from the Bidder's insurance agent or broker that such insurance is obtainable at the time of execution of the Agreement and that a Certificate of Insurance shall be provided to that effect not later than the date of Contract signing. (See page #00204-7)
- E. Contract award will be by AIA Agreement Form 101. A copy of the AIA Form 101 is included for the Bidder's information. The parties shall enter into an Agreement in substantially the same form as the attached subject to technical and other modifications as the parties mutually agree. A purchase order shall be issued by the Town subsequent to the execution of the Agreement.
- F. The Contractor by executing this Bid agrees and represents that no person acting for or employed by the Town of West Hartford is directly or indirectly interested in the Bid or proposed Agreement or in the supplies or works to which it relates, or will receive any part of the profit or any commission therefrom in any manner which is unethical or contrary to the best interest of the Owner.
- G. The Contractor agrees and warrants that in the performance of this Contract it will not discriminate or permit discrimination against any person or group of persons on the grounds of sex, race, color, religion, age, marital status, ancestry, national origin, past history of mental disorder, mental retardation or physical disability or other basis in any manner prohibited by the laws of the United States, the State of Connecticut, or the Town of West Hartford.
- H. The Contractor shall employ a full time, on-the-job Project Superintendent as his representative.
- I. The Contractor and/or Subcontractor offers and agrees to assign to the Town of West Hartford and/or the West Hartford Board of Education all rights, titles and interest in all causes of action it may have under Section 4 of the Clayton Act., 15 U.S.C. Section 15, or under Connecticut General Statutes 35-24 et. seq., as amended, arising out of the purchase of services, property, or intangibles of any kind pursuant to the Agreement, or Subcontracts thereunder. This assignment shall be made and become effective at the time the Town/Board awards or accepts such Agreement, without further acknowledgment by the parties. In the alternative, at the option of the Town, the Contractor and/or Subcontractor agrees to pay to the Town its proportionate share of recoveries for anti-trust violations which relate to purchases pursuant to this Contract, or Subcontracts hereunder. The Contractor and/or Subcontractor agrees promptly to notify the Purchasing Agent of the Town of West Hartford of suspected anti-trust violations and claims.

J. The Bidder is aware of and agrees that, if awarded an Agreement, he is bound by the following indemnification language:

1. To the fullest extent permitted by law, the Contractor shall release, defend, indemnify, and hold harmless the Town of West Hartford, and the West Hartford Board of Education, their respective boards, commissions, officers, officials, employees, agents, representatives, and servants from any and all suits, claims, losses, damages, costs (including without limitation reasonable attorneys' fees), compensation, penalties, fines, liabilities or judgments or any name or nature for:

1. Bodily injury, sickness, disease, or death; and/or
2. Damage to or destruction of property, real or personal; and/or
3. Financial losses (including, without limitation, those caused by loss of use)

sustained by any person or concern, including officers, employees, agents, Subcontractors or servants of the Town, the Board of Education, or the Contractor, or by the public, which is cause or alleged to have been caused in whole or in part by the negligent act(s) or omission(s) of the Contractor, its officers, employees, agents, or Subcontractors, in the performance of this Agreement or from the inaccuracy of any representation or warranty of the Contractor contained in the Contract Documents. This indemnity shall not be affected by other portions of the Agreement relating to insurance requirements.

2. To the fullest extent permitted by law, the Contractor agrees to release, defend, indemnify, and hold harmless the West Hartford Board of Education, and the Town of West Hartford, their respective boards and commissions, officials, officers, employees, agents, representatives, and servants from any loss, claim, cost penalty, fine or damage that may arise out of the failure of the Contractor, its officers, agents, employees or Subcontractors to comply with any laws or regulations of the United States of America, the State of Connecticut, the Town of West Hartford, West Hartford Board of Education, or their respective agencies. This undertaking shall not be affected by other portions of the Agreement relating to insurance requirements.

K. Substantial completion must be achieved by August 21, 2020 and final completion must be achieved by August 28, 2020. The Contractor shall pay the Owner liquidated damages in the amount of Three Hundred Dollars (\$300.00) per calendar day, which sum is hereby agreed upon, and shall be assessed not as a penalty, but as liquidated damages which the Owner shall suffer by reason of such default. The Owner and Contractor shall acknowledge that failure to effect substantial completion as noted above will precipitate inconvenience and disruption. The Owner and Contractor shall acknowledge that such damages are uncertain or difficult to prove and that the amounts established herein are reasonable assessment of these damages.

00204-5

BIDDER:

Bidder must sign. Failure to provide an original signature will result in rejection of the bid.

®

COMPANY

SIGNATURE BY DULY AUTHORIZED
(SEAL)

PRINT OR TYPE NAME

The bidder agrees that by affixing their signature to this request for bids, the authorized signatory grants approval to the Town of West Hartford to obtain third party credit reports for the purpose of assessing the financial capacity of the business entity tendering such bid to the Town.

TITLE

DATE

ADDRESS

TELEPHONE

FAX #

E-MAIL

VENDOR FEIN #

BID FORMS TO BE SUBMITTED IN DUPLICATE

If you are not registered with the Town of West Hartford, please go to <https://selfservice.westhartfordct.gov/MSS/Vendors/default.aspx> and select register. Only registered vendors can be awarded the contract.

00204-6

TO: Town of West Hartford
Peter Privitera
Purchasing Agent

FROM:

CLIENT:

DATE:

Dear Mr. Privitera:

In accordance with page 00204-3, Paragraph D of the "Bid Form", please be advised that my client currently has or will have by the date of the execution of the Agreement for this project, a Certificate of Insurance in amounts and types as specified in Article 11 of the Supplementary General Conditions.

Signature
Authorized Agent or Broker

00204-7

SUMMARY OF WORK HISTORY

2. The bidder is further required to furnish a complete list of all projects for which he has signed a construction contract within the past 36 months.

[illegible]

Bid Form

00204-9

Indemnification and Insurance Exhibit
Contractor Services
WHITING LANE E.S. MAIN ENTRANCE SECURITY RENOVATIONS
BID # 200042

For purpose of this Exhibit, the term "Contractor" shall also include their respective agents, contractors of any tier, employees, representatives; and the term "Town of West Hartford and West Hartford Board of Education" (hereinafter called the "Town") shall include their respective agents, boards, commissions, contractors of any tier, counsel, directors, employees, officers and/or officials (appointed or elected), representatives and volunteers.

I. INDEMNIFICATION

- A. To the fullest extent permitted by law, the Contractor shall defend, indemnify, release and hold harmless the Town of West Hartford, West Hartford Board of Education, and their respective agents, boards, commissions, contractors of any tier, counsel, directors, employees, officers and/or officials (appointed or elected), representatives and volunteers from any and all actions, claims, compensation, damages, fines, lawsuits, losses, costs (including without limitation reasonable attorneys' fees, filing fees, and court costs), penalties, liabilities or judgments of any name or nature for bodily injury, death, disease, or sickness; and/or damage to or destruction of real and/or personal property; and/or financial losses (including, without limitation, those caused by loss of use) sustained by any person or concern, including Town of West Hartford and West Hartford Board of Education, and/or its agents, boards, commissions, contractors of any tier, counsel, directors, employees, officers and/or officials (appointed or elected), representative, and volunteers, the Contractor, or by the public, even if caused or alleged to have been caused in whole or in part by any and all negligent or intentional acts, errors or omissions of the Contractor, and/or its agents, contractors of any tier, employees, representatives, or anyone directly or indirectly employed by them arising from or related to the performance of the underlying agreement.
- B. To the fullest extent permitted by law, the Contractor shall defend, indemnify, release and hold harmless the Town of West Hartford, West Hartford Board of Education, and their respective agents, boards, commissions, contractors of any tier, counsel, directors, employees, officers, and/or officials (appointed or elected), representatives and volunteers from any and all actions, claims, compensation, damages, fines, lawsuits, losses, costs, (including without limitation reasonable attorneys' fees, filing fees and court costs), penalties, liabilities or judgments that may arise out of the failure of the Contractor, its agents, contractors of any tier, employees, representatives, or anyone directly or indirectly employed by them to comply with any laws, statutes, ordinances, building codes, and rules and regulations of the United States of America, the State of Connecticut, the Town of West Hartford, or their respective agencies.
- C. This duty to indemnify shall not be constrained or affected by the Contractor's insurance coverage or limits, or any other portion of the agreement relating to insurance requirements. The Parties agree that the Contractor's responsibilities and obligations to indemnify shall survive the completion, expiration, suspension or termination of the agreement.

II. INSURANCE

A. Insurance Requirements

1. The Contractor shall obtain and maintain at its own cost and expense all the insurance described below continuously for the duration of the underlying agreement, including any and all extensions, except as defined otherwise in this exhibit.
2. Contractor's policies shall be written by insurance companies authorized to do business in the State of Connecticut, with a Best's rating of no less than A:VII, or otherwise approved by the Town.
3. All policies (with the exception of Worker's Compensation and Professional Liability) shall be endorsed to include the Town of West Hartford, West Hartford Board of Education, and their respective agents, boards, commissions, contractors of any tier, counsel, directors, employees, officers and/or officials (appointed or elected), representatives, and volunteers as an additional insured. The coverage shall include, but not be limited to, defense, investigation, judgment, payment, or settlement of any legal liability. Blanket Additional Insured Endorsements are acceptable. Any Insured vs. Insured language shall be amended to eliminate any conflicts or coverage restrictions between the respective Insureds.
4. When the Town or the Contractor is damaged by the Contractor's failure to purchase or maintain insurance required under this exhibit, the Contractor shall bear all reasonable costs including, but not limited to, attorney's

fees, court costs, and all other costs of litigation properly attributable to the Contractor's failure to purchase or maintain insurance.

B. Required Insurance Coverages:

1. **Commercial General Liability:** \$1,000,000 each occurrence / \$2,000,000 aggregate for premises/operations, products/ completed operations, contractual liability, independent contractors, personal injury and broad form property damage. Contractor shall continue to provide products/ completed operations coverage for two (2) years after completion of the work to be performed as identified in the underlying agreement.
2. **Automobile Liability and Physical Damage Coverage:** \$1,000,000 each accident for any auto, including uninsured/underinsured motorist coverage and medical payments. Policy shall include collision and comprehensive physical damage coverage. If a vehicle is not used in the execution of the underlying agreement then the Risk Manager may waive automobile coverage.
3. **Umbrella Liability:** \$2,000,000 each occurrence / \$4,000,000 aggregate, following form.
4. **Workers' Compensation and Employer's Liability:** Statutory coverage in compliance with the Workers' Compensation laws of the State of Connecticut. Policy shall include Employer's Liability with minimum limits of \$100,000 each accident, \$500,000 disease/policy limit, \$100,000 disease/each employee.

The Contractor represents that they are currently in compliance with all requirements of the State of Connecticut Workers' Compensation Act and that it shall remain in compliance for the duration of the underlying agreement. The Contractor agrees that Workers' Compensation is their sole remedy and shall indemnify and hold harmless the Town from all actions, claims, and lawsuits, proceedings and/or exposure arising from personal injuries to the Contractor, however caused. This indemnity shall not be affected by a lapse of Workers' Compensation coverage and/or if the Contractor failed, neglected, refused or is unable to obtain Workers' Compensation insurance.

5. **Personal Property:** All personal property of the Contractor are the sole risk of the Contractor. The Contractor agrees to defend, hold harmless and indemnify the Town from any and all claims, compensation, costs, damages, fines, losses, payments, penalties of any kind, however caused, to any and all personal property belonging to the Contractor.

C. Additional Terms

1. **Minimum Scope and Limits:** The required insurance shall meet the scope and limits of insurance specified in this exhibit, or required by applicable federal, state and/or municipal law, regulation or requirement, whichever coverage is greater. The limits of insurance stated herein for each type of insurance are minimum limits only. If the Contractor's policy provides greater limits, then the Town shall be entitled to the full limits of such policy and this exhibit shall be deemed to require such full limits.

Acceptance by the Town of insurance submitted by the Contractor does not relieve or decrease in any manner the liability of the Contractor arising out of or in connection with the underlying agreement. The Contractor is responsible for any claims compensation, costs, damages, fines, losses, payments and penalties of any kind which exceed the Contractor's limits of liability, or which may be outside the coverage scope of the policies, or a result of non-compliance with any laws including, but not limited to, environmental laws. The requirements herein are not intended, and shall not be construed to limit or eliminate the liability of the Contractor that arises from the underlying agreement.

2. **Certificates of Insurance:** The Contractor shall provide certificates of insurance, policy endorsements, declaration page(s) or provisions acceptable to the Town confirming compliance with this exhibit and thereafter upon renewal or replacement of each required policy of insurance. Upon request, the Contractor agrees to furnish complete copies of the required policies.
3. **Subcontractors:** The Contractor shall cause all subcontractors of any tier, acting on its behalf, to comply with this exhibit. The Contractor shall either include its subcontractors as an insured under its insurance policies or furnish separate certificates of insurance and endorsements for each subcontractor.
4. **Premiums, Deductibles and Other Liabilities:** Any and all related costs, including but not limited to, deductibles, retentions, losses, claim expenses, premiums, taxes, and audit charges earned are the sole responsibility of the Contractor.
5. **Occurrence Form, Primary and Non-Contributory:** All required insurance coverage shall be written on an occurrence basis, except as defined otherwise in this exhibit. All policies (including primary, excess and/or

umbrella) shall be primary and non-contributory with respect to any other insurance or self-insurance maintained by or available to the Town.

6. Claims-made Form: Insurance coverage written on a claims-made basis shall have a retroactive date that precedes the effective date of the underlying agreement. The Contractor shall maintain continuous coverage or obtain an extended reporting period in which to report claims following end of the underlying agreement, for a minimum of two (2) years, except as defined otherwise in this exhibit.
7. Waiver of Rights of Recovery: Both the Contractor and Contractor's insurers shall waive their rights of recovery or subrogation against the Town.
8. Claim Reporting: Any failure of the Contractor to comply with the claim reporting provisions of the required insurance policies shall not relieve the Contractor of any liability or indemnification in favor of the Town for losses which otherwise would have been covered by said policies.
9. Cancellation Notice: Each required insurance policy shall not be cancelled, reduced, suspended, voided except after thirty (30) days prior written notice has been given to the Town, ten (10) days for non-payment of premium.
10. Compliance: Failure to comply with any of the indemnification or insurance requirements may be held a willful violation and basis for immediate termination of the underlying agreement.

3.0 LABOR REQUIREMENTS

Since there are other projects anticipated to be in progress at this location during this time period, ALL BIDS MUST INCORPORATE STATE OF CONNECTICUT PREVAILING WAGE RATES AS PROVIDED IN THIS DOCUMENT. The awarded bidder will be required to pay prevailing wages.

3.01 PREVAILING WAGE RATES

- 3.01.01 The Contractor shall certify in writing and under oath to the Labor Commissioner the pay scale to be used by the Contractor and any Subcontractors. The provisions of this section shall not apply where the total cost of all work to be performed by ALL Contractors and Subcontractors in connection with new construction of any public works project is less than FOUR HUNDRED thousand dollars or where the total cost of all work to be performed by ALL Contractors and Subcontractors in connection with any remodeling, refinishing, refurbishing, rehabilitation, alteration or repair of any public works project is less than ONE HUNDRED thousand dollars. The Contractor shall fully comply with all provisions of Connecticut General Statutes (CGS) 31-53 and shall be subject to such sanctions mandated for violations of said Public Act.
- 3.01.02 The wages paid on an hourly basis to any mechanic, laborer or workman employed upon the work herein contracted to be done and the amount of payment or contribution paid or payable on behalf of each such employee to any employee welfare fund, as defined in CGS 31-53 shall be at a rate equal to the rate customary or prevailing for the same work in the same trade or occupation in the Town in which such public works project is being constructed. Any contractor who is not obligated by agreement to make payment or contribution on behalf of such employees to any such employee welfare fund shall pay to each employee as part of his wages the amount of payment or contribution for his classification on each pay day.
- 3.01.03 The contractor shall not be paid in accordance with the payment provisions of these Contract Bidding Documents unless the contractor is in full compliance with the mandates of CGS 31-53.
- 3.01.04 Bidders are further advised that if the initial consideration due and payable pursuant to the Contract exceeds the mandatory limits at which prevailing wages rates are required, then the contractor and any subcontractors shall pay the appropriate prevailing wages retroactive to the date of commencement of work on the project. The contractor shall not receive any additional compensation from the Owner as a result of an occurrence of the aforementioned event.

**Minimum Rates and Classifications for
Building Construction**

ID#: 20-12603

**Connecticut Department of Labor
Wage and Workplace Standards Division**

By virtue of the authority vested in the Labor Commissioner under provisions of Section 31-53 of the General Statutes of Connecticut, as amended, the following are declared to be the prevailing rates and welfare payments and will apply only where the contract is advertised for bid within 20 days of the date on which the rates are established. Any contractor or subcontractor not obligated by agreement to pay to the welfare and pension fund shall pay this amount to each employee as part of his/her hourly wages.

Project Number: Whiting Lane

Project Town: West Hartford

State#: West Hartford

FAP#: Whiting Lane

Project: Whiting Lane Elementary School Security Renovation

CLASSIFICATION	Hourly Rate	Benefits
1b) Asbestos/Toxic Waste Removal Laborers: Asbestos removal and encapsulation (except its removal from mechanical systems which are not to be scrapped), toxic waste removers, blasters.**See Laborers Group 7**		
1c) Asbestos Worker/Heat and Frost Insulator	40.21	30.99
2) Boilermaker	38.34	26.01
3a) Bricklayer, Cement Mason, Concrete Finisher (including caulking), Stone Masons	35.71	33.31 + a
3b) Tile Setter	34.9	25.87
3c) Terrazzo Mechanics and Marble Setters	31.69	22.35
3d) Tile, Marble & Terrazzo Finishers	26.7	21.75
3e) Plasterer	33.48	32.06
-----LABORERS-----		
4) Group 1: Laborers (common or general), acetylene burners, carpenter tenders, concrete specialists, wrecking laborers, fire watchers.	31.0	22.15
4a) Group 2: Mortar mixers, plaster tender, power buggy operators, powdermen, fireproofers/mixer/nozzleman (Person running mixer and spraying fireproof only).	31.25	22.15

As of: May 12, 2020

Project: Whiting Lane Elementary School Security Renovation

4b) Group 3: Jackhammer operators/pavement breaker, mason tender (brick), mason tender (cement/concrete), forklift operators and forklift operators (masonry).	31.5	22.15
4c) **Group 4: Pipelayers (Installation of water, storm drainage or sewage lines outside of the building line with P6, P7 license) (the pipelayer rate shall apply only to one or two employees of the total crew who primary task is to actually perform the mating of pipe sections) P6 and P7 rate is \$26.80.	32.0	22.15
4d) Group 5: Air track operator, sand blaster and hydraulic drills.	31.75	22.15
4e) Group 6: Blasters, nuclear and toxic waste removal.	34.0	22.15
4f) Group 7: Asbestos/lead removal and encapsulation (except it's removal from mechanical systems which are not to be scrapped).	32.0	22.15
4g) Group 8: Bottom men on open air caisson, cylindrical work and boring crew.	29.28	22.15
4h) Group 9: Top men on open air caisson, cylindrical work and boring crew.	28.74	22.15
4i) Group 10: Traffic Control Signalman	18.0	22.15
5) Carpenter, Acoustical Ceiling Installation, Soft Floor/Carpet Laying, Metal Stud Installation, Form Work and Scaffold Building, Drywall Hanging, Modular-Furniture Systems Installers, Lathers, Piledrivers, Resilient Floor Layers.	33.53	25.66
5a) Millwrights	34.94	26.19
6) Electrical Worker (including low voltage wiring) (Trade License required: E1,2 L-5,6 C-5,6 T-1,2 L-1,2 V-1,2,7,8,9)	40.0	27.67+3% of gross wage
7a) Elevator Mechanic (Trade License required: R-1,2,5,6)	55.12	34.765+a+b
-----LINE CONSTRUCTION-----		
Groundman	26.5	6.5% + 9.00
Linemen/Cable Splicer	48.19	6.5% + 22.00
8) Glazier (Trade License required: FG-1,2)	38.18	21.80 + a

9) Ironworker, Ornamental, Reinforcing, Structural, and Precast Concrete Erection	36.67	35.77
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----OPERATORS----

Group 1: Crane handling or erecting structural steel or stone, hoisting engineer 2 drums or over, front end loader (7 cubic yards or over), work boat 26 ft. and over and Tunnel Boring Machines. (Trade License Required)	42.45	25.30 + a
Group 2: Cranes (100 ton rate capacity and over); Excavator over 2 cubic yards; Piledriver (\$3.00 premium when operator controls hammer); Bauer Drill/Caisson. (Trade License Required)	42.11	25.30 + a
Group 3: Excavator; Backhoe/Excavator under 2 cubic yards; Cranes (under 100 ton rated capacity), Grader/Blade; Master Mechanic; Hoisting Engineer (all types of equipment where a drum and cable are used to hoist or drag material regardless of motive power of operation), Rubber Tire Excavator (Drott-1085 or similar); Grader Operator; Bulldozer Fine Grade. (slopes, shaping, laser or GPS, etc.). (Trade License Required)	41.32	25.30 + a
Group 4: Trenching Machines; Lighter Derrick; Concrete Finishing Machine; CMI Machine or Similar; Koehring Loader (Skooper).	40.91	25.30 + a
Group 5: Specialty Railroad Equipment; Asphalt Paver; Asphalt Reclaiming Machine; Line Grinder; Concrete Pumps; Drills with Self Contained Power Units; Boring Machine; Post Hole Digger; Auger; Pounder; Well Digger; Milling Machine (over 24	40.28	25.30 + a
Group 5 continued: Side Boom; Combination Hoe and Loader; Directional Driller; Pile Testing Machine.	40.28	25.30 + a
Group 6: Front End Loader (3 up to 7 cubic yards); Bulldozer (rough grade dozer).	39.95	25.30 + a
Group 7: Asphalt roller, concrete saws and cutters (ride on types), vermeer concrete cutter, Stump Grinder; Scraper; Snooper; Skidder; Milling Machine (24	39.59	25.30 + a
Group 8: Mechanic, grease truck operator, hydroblaster; barrier mover; power stone spreader; welding; work boat under 26 ft.; transfer machine.	39.17	25.30 + a
Group 9: Front end loader (under 3 cubic yards), skid steer loader regardless of attachments, (Bobcat or Similar): forklift, power chipper; landscape equipment (including Hydroseeder).	38.71	25.30 + a
Group 10: Vibratory hammer; ice machine; diesel and air, hammer, etc.	36.54	25.30 + a
Group 11: Conveyor, earth roller, power pavement breaker (whiphammer), robot demolition equipment.	36.54	25.30 + a

Group 12: Wellpoint operator.	36.48	25.30 + a
Group 13: Compressor battery operator.	35.86	25.30 + a
Group 14: Elevator operator; tow motor operator (solid tire no rough terrain).	34.66	25.30 + a
Group 15: Generator Operator; Compressor Operator; Pump Operator; Welding Machine Operator; Heater Operator.	34.23	25.30 + a
Group 16: Maintenance Engineer/Oiler.	33.54	25.30 + a
Group 17: Portable asphalt plant operator; portable crusher plant operator; portable concrete plant operator.	38.11	25.30 + a
Group 18: Power safety boat; vacuum truck; zim mixer; sweeper; (Minimum for any job requiring a CDL license).	35.53	25.30 + a
-----PAINTERS (Including Drywall Finishing)-----		
10a) Brush and Roller	34.62	21.80
10b) Taping Only/Drywall Finishing	35.37	21.80
10c) Paperhanger and Red Label	34.12	21.05
10e) Blast and Spray	36.62	21.05
11) Plumber (excluding HVAC pipe installation) (Trade License required: P-1,2,6,7,8,9 J-1,2,3,4 SP-1,2)	43.62	32.06
12) Well Digger, Pile Testing Machine	37.26	24.05 + a
13) Roofer (composition)	37.6	20.65
14) Roofer (slate & tile)	38.1	20.65
15) Sheetmetal Worker (Trade License required for HVAC and Ductwork: SM-1,SM-2,SM-3,SM-4,SM-5,SM-6)	37.98	38.31
16) Pipefitter (Including HVAC work) (Trade License required: S-1,2,3,4,5,6,7,8 B-1,2,3,4 D-1,2,3,4, G-1, G-2, G-8 & G-9)	43.62	32.06

-----TRUCK DRIVERS-----

17a) 2 Axle	29.86	25.79 + a
17b) 3 Axle, 2 Axle Ready Mix	29.97	25.79 + a
17c) 3 Axle Ready Mix	30.03	25.79 + a
17d) 4 Axle, Heavy Duty Trailer up to 40 tons	30.08	25.79 + a
17e) 4 Axle Ready Mix	30.13	25.79 + a
17f) Heavy Duty Trailer (40 Tons and Over)	30.35	25.79 + a
17g) Specialized Earth Moving Equipment (Other Than Conventional Type on-the-Road Trucks and Semi-Trailers, Including Euclids)	30.13	25.79 + a
18) Sprinkler Fitter (Trade License required: F-1,2,3,4)	45.92	26.08 + a
19) Theatrical Stage Journeyman	25.76	7.34

Welders: Rate for craft to which welding is incidental.

**Note: Hazardous waste removal work receives additional \$1.25 per hour for truck drivers.*

***Note: Hazardous waste premium \$3.00 per hour over classified rate*

ALL Cranes: When crane operator is operating equipment that requires a fully licensed crane operator to operate he receives an extra \$4.00 premium in addition to the hourly wage rate and benefit contributions:

- 1) Crane handling or erecting structural steel or stone; hoisting engineer (2 drums or over)**
- 2) Cranes (100 ton rate capacity and over) Bauer Drill/Caisson**
- 3) Cranes (under 100 ton rated capacity)**

Crane with 150 ft. boom (including jib) - \$1.50 extra

Crane with 200 ft. boom (including jib) - \$2.50 extra

Crane with 250 ft. boom (including jib) - \$5.00 extra

Crane with 300 ft. boom (including jib) - \$7.00 extra

Crane with 400 ft. boom (including jib) - \$10.00 extra

All classifications that indicate a percentage of the fringe benefits must be calculated at the percentage rate times the "base hourly rate".

Apprentices duly registered under the Commissioner of Labor's regulations on "Work Training Standards for Apprenticeship and Training Programs" Section 31-51-d-1 to 12, are allowed to be paid the appropriate percentage of the prevailing journeymen hourly base and the full fringe benefit rate, providing the work site ratio shall not be less than one full-time journeyman instructing and supervising the work of each apprentice in a specific trade.

The Prevailing wage rates applicable to this project are subject to annual adjustments each July 1st for the duration of the project.

Each contractor shall pay the annual adjusted prevailing wage rate that is in effect each July 1st, as posted by the Department of Labor.

It is the contractor's responsibility to obtain the annual adjusted prevailing wage rate increases directly from the Department of Labor's website.

The annual adjustments will be posted on the Department of Labor's Web page: www.ct.gov/dol. For those without internet access, please contact the division listed below.

The Department of Labor will continue to issue the initial prevailing wage rate schedule to the Contracting Agency for the project.

All subsequent annual adjustments will be posted on our Web Site for contractor access.

Contracting Agencies are under no obligation pursuant to State labor law to pay any increase due to the annual adjustment provision.

Effective October 1, 2005 - Public Act 05-50: any person performing the work of any mechanic, laborer, or worker shall be paid prevailing wage

All Person who perform work ON SITE must be paid prevailing wage for the appropriate mechanic, laborer, or worker classification.

All certified payrolls must list the hours worked and wages paid to All Persons who perform work ON SITE regardless of their ownership i.e.: (Owners, Corporate Officers, LLC Members, Independent Contractors, et. al)

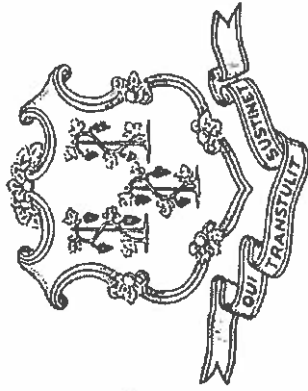
Reporting and payment of wages is required regardless of any contractual relationship alleged to exist between the contractor and such person.

Project: Whiting Lane Elementary School Security Renovation

--Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clause (29 CFR 5.5 (a) (1) (ii)).

Please direct any questions which you may have pertaining to classification of work and payment of prevailing wages to the Wage and Workplace Standards Division, telephone (860)263-6790.

As of: May 12, 2020



Opportunity ★ Guidance ★ Support



THIS IS A PUBLIC WORKS PROJECT

Covered by the

PREVAILING WAGE LAW

CT General Statutes Section 31-53

**If you have QUESTIONS regarding your wages
CALL (860) 263-6790**

Section 31-55 of the CT State Statutes requires every contractor or subcontractor performing work for the state to post in a prominent place the prevailing wages as determined by the Labor Commissioner.

Sec. 31-53b. Construction safety and health course. New miner training program. Proof of completion required for mechanics, laborers and workers on public works projects. Enforcement. Regulations. Exceptions. (a) Each contract for a public works project entered into on or after July 1, 2009, by the state or any of its agents, or by any political subdivision of the state or any of its agents, described in subsection (g) of section 31-53, shall contain a provision requiring that each contractor furnish proof with the weekly certified payroll form for the first week each employee begins work on such project that any person performing the work of a mechanic, laborer or worker pursuant to the classifications of labor under section 31-53 on such public works project, pursuant to such contract, has completed a course of at least ten hours in duration in construction safety and health approved by the federal Occupational Safety and Health Administration or, has completed a new miner training program approved by the Federal Mine Safety and Health Administration in accordance with 30 CFR 48 or, in the case of telecommunications employees, has completed at least ten hours of training in accordance with 29 CFR 1910.268.

(b) Any person required to complete a course or program under subsection (a) of this section who has not completed the course or program shall be subject to removal from the worksite if the person does not provide documentation of having completed such course or program by the fifteenth day after the date the person is found to be in noncompliance. The Labor Commissioner or said commissioner's designee shall enforce this section.

(c) Not later than January 1, 2009, the Labor Commissioner shall adopt regulations, in accordance with the provisions of chapter 54, to implement the provisions of subsections (a) and (b) of this section. Such regulations shall require that the ten-hour construction safety and health courses required under subsection (a) of this section be conducted in accordance with federal Occupational Safety and Health Administration Training Institute standards, or in accordance with Federal Mine Safety and Health Administration Standards or in accordance with 29 CFR 1910.268, as appropriate. The Labor Commissioner shall accept as sufficient proof of compliance with the provisions of subsection (a) or (b) of this section a student course completion card issued by the federal Occupational Safety and Health Administration Training Institute, or such other proof of compliance said commissioner deems appropriate, dated no earlier than five years before the commencement date of such public works project.

(d) This section shall not apply to employees of public service companies, as defined in section 16-1, or drivers of commercial motor vehicles driving the vehicle on the public works project and delivering or picking up cargo from public works projects provided they perform no labor relating to the project other than the loading and unloading of their cargo.

(P.A. 06-175, S. 1; P.A. 08-83, S. 1.)

History: P.A. 08-83 amended Subsec. (a) by making provisions applicable to public works project contracts entered into on or after July 1, 2009, replacing provision re total cost of work with reference to Sec. 31-53(g), requiring proof in certified payroll form that new mechanic, laborer or worker has completed a 10-hour or more construction safety course and adding provision re new miner training program, amended Subsec. (b) by substituting "person" for "employee" and adding "or program", amended Subsec. (c) by adding "or in accordance with Federal Mine Safety and Health Administration Standards" and setting new deadline of January 1, 2009, deleted former Subsec. (d) re "public building", added new Subsec. (d) re exemptions for public service company employees and delivery drivers who perform no labor other than delivery and made conforming and technical changes, effective January 1, 2009.

Informational Bulletin

THE 10-HOUR OSHA CONSTRUCTION SAFETY AND HEALTH COURSE

(applicable to public building contracts entered into *on or after July 1, 2007*, where the total cost of all work to be performed is at least \$100,000)

- (1) This requirement was created by Public Act No. 06-175, which is codified in Section 31-53b of the Connecticut General Statutes (pertaining to the prevailing wage statutes);
- (2) The course is required for public building construction contracts (projects funded in whole or in part by the state or any political subdivision of the state) entered into on or after July 1, 2007;
- (3) It is required of private employees (not state or municipal employees) and apprentices who perform manual labor for a general contractor or subcontractor on a public building project where the total cost of all work to be performed is at least \$100,000;
- (4) The ten-hour construction course pertains to the ten-hour Outreach Course conducted in accordance with federal OSHA Training Institute standards, and, for telecommunications workers, a ten-hour training course conducted in accordance with federal OSHA standard, 29 CFR 1910.268;
- (5) The internet website for the federal OSHA Training Institute is http://www.osha.gov/fso/ote/training/edcenters/fact_sheet.html;
- (6) The statutory language leaves it to the contractor and its employees to determine who pays for the cost of the ten-hour Outreach Course;
- (7) Within 30 days of receiving a contract award, a general contractor must furnish proof to the Labor Commissioner that all employees and apprentices performing manual labor on the project will have completed such a course;
- (8) Proof of completion may be demonstrated through either: (a) the presentation of a *bona fide* student course completion card issued by the federal OSHA Training Institute; *or* (2) the presentation of documentation provided to an employee by a trainer certified by the Institute pending the actual issuance of the completion card;
- (9) Any card with an issuance date more than 5 years prior to the commencement date of the construction project shall not constitute proof of compliance;

- (10) Each employer shall affix a copy of the construction safety course completion card to the certified payroll submitted to the contracting agency in accordance with Conn. Gen. Stat. § 31-53(f) on which such employee's name first appears;
- (11) Any employee found to be in non-compliance shall be subject to removal from the worksite if such employee does not provide satisfactory proof of course completion to the Labor Commissioner by the fifteenth day after the date the employee is determined to be in noncompliance;
- (12) Any such employee who is determined to be in noncompliance may continue to work on a public building construction project for a maximum of fourteen consecutive calendar days while bringing his or her status into compliance;
- (13) The Labor Commissioner may make complaint to the prosecuting authorities regarding any employer or agent of the employer, or officer or agent of the corporation who files a false certified payroll with respect to the status of an employee who is performing manual labor on a public building construction project;
- (14) The statute provides the minimum standards required for the completion of a safety course by manual laborers on public construction contracts; any contractor can exceed these minimum requirements; and
- (15) Regulations clarifying the statute are currently in the regulatory process, and shall be posted on the CTDOL website as soon as they are adopted in final form.
- (16) Any questions regarding this statute may be directed to the Wage and Workplace Standards Division of the Connecticut Labor Department via the internet website of <http://www.ctdol.state.ct.us/wgwkstnd/wgemenu.htm>; or by telephone at (860)263-6790.

THE ABOVE INFORMATION IS PROVIDED EXCLUSIVELY AS AN EDUCATIONAL RESOURCE, AND IS NOT INTENDED AS A SUBSTITUTE FOR LEGAL INTERPRETATIONS WHICH MAY ULTIMATELY ARISE CONCERNING THE CONSTRUCTION OF THE STATUTE OR THE REGULATIONS.

November 29, 2006

Notice
To All Mason Contractors and Interested Parties
Regarding Construction Pursuant to Section 31-53 of the
Connecticut General Statutes (Prevailing Wage)

The Connecticut Labor Department Wage and Workplace Standards Division is empowered to enforce the prevailing wage rates on projects covered by the above referenced statute.

Over the past few years the Division has withheld enforcement of the rate in effect for workers who operate a forklift on a prevailing wage rate project due to a potential jurisdictional dispute.

The rate listed in the schedules and in our Occupational Bulletin (see enclosed) has been as follows:

Forklift Operator:

- **Laborers (Group 4) Mason Tenders** - operates forklift solely to assist a mason to a maximum height of nine feet only.
- **Power Equipment Operator (Group 9)** - operates forklift to assist any trade and to assist a mason to a height over nine feet.

The U.S. Labor Department conducted a survey of rates in Connecticut but it has not been published and the rate in effect remains as outlined in the above Occupational Bulletin.

Since this is a classification matter and not one of jurisdiction, effective January 1, 2007 the Connecticut Labor Department will enforce the rate on each schedule in accordance with our statutory authority.

Your cooperation in filing appropriate and accurate certified payrolls is appreciated.

STATUTE 31-55a

- SPECIAL NOTICE -

To: All State and Political Subdivisions, Their Agents, and Contractors

Connecticut General Statute 31-55a - Annual adjustments to wage rates by contractors doing state work.

Each contractor that is awarded a contract on or after October 1, 2002, for (1) the construction of a state highway or bridge that falls under the provisions of section 31-54 of the general statutes, or (2) the construction, remodeling, refinishing, refurbishing, rehabilitation, alteration or repair of any public works project that falls under the provisions of section 31-53 of the general statutes shall contact the Labor Commissioner on or before July first of each year, for the duration of such contract, to ascertain the prevailing rate of wages on an hourly basis and the amount of payment or contributions paid or payable on behalf of each mechanic, laborer or worker employed upon the work contracted to be done, and shall make any necessary adjustments to such prevailing rate of wages and such payment or contributions paid or payable on behalf of each such employee, effective each July first.

- The prevailing wage rates applicable to any contract or subcontract awarded on or after October 1, 2002 are subject to annual adjustments each July 1st for the duration of any project which was originally advertised for bids on or after October 1, 2002.
- Each contractor affected by the above requirement shall pay the annual adjusted prevailing wage rate that is in effect each July 1st, as posted by the Department of Labor.
- It is the **contractor's** responsibility to obtain the annual adjusted prevailing wage rate increases directly from the Department of Labor's Web Site. The annual adjustments will be posted on the Department of Labor Web page: www.ctdol.state.ct.us. For those without internet access, please contact the division listed below.
- The Department of Labor will continue to issue the initial prevailing wage rate schedule to the Contracting Agency for the project. All subsequent annual adjustments will be posted on our Web Site for contractor access.

Any questions should be directed to the Contract Compliance Unit, Wage and Workplace Standards Division, Connecticut Department of Labor, 200 Folly Brook Blvd., Wethersfield, CT 06109 at (860)263-6790.

Information Bulletin

Occupational Classifications

The Connecticut Department of Labor has the responsibility to properly determine "job classification" on prevailing wage projects covered under C.G.S. Section 31-53(d).

Note: This information is intended to provide a sample of some occupational classifications for guidance purposes only. It is not an all-inclusive list of each occupation's duties. This list is being provided only to highlight some areas where a contractor may be unclear regarding the proper classification. If unsure, the employer should seek guidelines for CTDOL.

Below are additional clarifications of specific job duties performed for certain classifications:

- **ASBESTOS WORKERS**

Applies all insulating materials, protective coverings, coatings and finishes to all types of mechanical systems.

- **ASBESTOS INSULATOR**

Handle, install apply, fabricate, distribute, prepare, alter, repair, dismantle, heat and frost insulation, including penetration and fire stopping work on all penetration fire stop systems.

- **BOILERMAKERS**

Erects hydro plants, incomplete vessels, steel stacks, storage tanks for water, fuel, etc. Builds incomplete boilers, repairs heat exchanges and steam generators.

- **BRICKLAYERS, CEMENT MASONS, CEMENT FINISHERS, MARBLE MASONS, PLASTERERS, STONE MASONS, PLASTERERS. STONE MASONS, TERRAZZO WORKERS, TILE SETTERS**

Lays building materials such as brick, structural tile and concrete cinder, glass, gypsum, terra cotta block. Cuts, tools and sets marble, sets stone, finishes concrete, applies decorative steel, aluminum and plastic tile, applies cements, sand, pigment and marble chips to floors, stairways, etc.

- **CARPENTERS, MILLWRIGHTS. PILEDRIVERMEN. LATHERS. RESILIENT FLOOR LAYERS, DOCK BUILDERS, DIKERS, DIVER TENDERS**

Constructs, erects, installs and repairs structures and fixtures of wood, plywood and wallboard. Installs, assembles, dismantles, moves industrial machinery. Drives piling into ground to provide foundations for structures such as buildings and bridges, retaining walls for earth embankments, such as cofferdams. Fastens wooden, metal or rockboard lath to walls, ceilings and partitions of buildings, acoustical tile layer, concrete form builder. Applies firestopping materials on fire resistive joint systems only. Installation of curtain/window walls only where attached to wood or metal studs. Installation of insulated material of all types whether blown, nailed or attached in other ways to walls, ceilings and floors of buildings. Assembly and installation of modular furniture/furniture systems. Free-standing furniture is not covered. This includes free standing: student chairs, study top desks, book box desks, computer furniture, dictionary stand, atlas stand, wood shelving, two-position information access station, file cabinets, storage cabinets, tables, etc.

- **LABORER, CLEANING**

- The clean up of any construction debris and the general (heavy/light) cleaning, including sweeping, wash down, mopping, wiping of the construction facility and its furniture, washing, polishing, and dusting.

- **DELIVERY PERSONNEL**

- If delivery of supplies/building materials is to one common point and stockpiled there, prevailing wages are not required. If the delivery personnel are involved in the distribution of the material to multiple locations within the construction site then they would have to be paid prevailing wages for the type of work performed: laborer, equipment operator, electrician, ironworker, plumber, etc.

- An example of this would be where delivery of drywall is made to a building and the delivery personnel distribute the drywall from one "stockpile" location to further sub-locations on each floor. Distribution of material around a construction site is the job of a laborer or tradesman, and not a delivery personnel.

- **ELECTRICIANS**

Install, erect, maintenance, alteration or repair of any wire, cable, conduit, etc., which generates, transforms, transmits or uses electrical energy for light, heat, power or other purposes, including the installation or maintenance of telecommunication, LAN wiring or computer equipment, and low voltage wiring. **License required per Connecticut General Statutes: E-1,2 L-5,6 C-5,6 T-1,2 L-1,2 V-1,2,7,8,9.*

- **ELEVATOR CONSTRUCTORS**

Install, erect, maintenance and repair of all types of elevators, escalators, dumb waiters and moving walks. **License required by Connecticut General Statutes: R-1,2,5,6.*

- **FORK LIFT OPERATOR**

Laborers Group 4) Mason Tenders - operates forklift solely to assist a mason to a maximum height of nine (9) feet only.

Power Equipment Operator Group 9 - operates forklift to assist any trade, and to assist a mason to a height over nine (9) feet.

- **GLAZIERS**

Glazing wood and metal sash, doors, partitions, and 2 story aluminum storefronts. Installs glass windows, skylights, store fronts and display cases or surfaces such as building fronts, interior walls, ceilings and table tops and metal store fronts. Installation of aluminum window walls and curtain walls is the "joint" work of glaziers and ironworkers, which require equal composite workforce.

- **IRONWORKERS**

Erection, installation and placement of structural steel, precast concrete, miscellaneous iron, ornamental iron, metal curtain wall, rigging and reinforcing steel. Handling, sorting, and installation of reinforcing steel (rebar). Metal bridge rail (traffic), metal bridge handrail, and decorative security fence installation. Installation of aluminum window walls and curtain walls is the "joint" work of glaziers and ironworkers which require equal composite workforce.

- **INSULATOR**

- Installing fire stopping systems/materials for "Penetration Firestop Systems": transit to cables, electrical conduits, insulated pipes, sprinkler pipe penetrations, ductwork behind radiation, electrical cable trays, fire rated pipe penetrations, natural polypropylene, HVAC ducts, plumbing bare metal, telephone and communication wires, and boiler room ceilings.

- **LABORERS**

Acetylene burners, asphalt rakers, chain saw operators, concrete and power buggy operator, concrete saw operator, fence and guard rail erector (except metal bridge rail (traffic), decorative security fence (non-metal)).

installation.), hand operated concrete vibrator operator, mason tenders, pipelayers (installation of storm drainage or sewage lines on the street only), pneumatic drill operator, pneumatic gas and electric drill operator, powermen and wagon drill operator, air track operator, block paver, curb setters, blasters, concrete spreaders.

- **PAINTERS**

Maintenance, preparation, cleaning, blasting (water and sand, etc.), painting or application of any protective coatings of every description on all bridges and appurtenances of highways, roadways, and railroads. Painting, decorating, hardwood finishing, paper hanging, sign writing, scenic art work and drywall hhg for any and all types of building and residential work.

- **LEAD PAINT REMOVAL**

- Painter's Rate

1. Removal of lead paint from bridges.
2. Removal of lead paint as preparation of any surface to be repainted.
3. Where removal is on a Demolition project prior to reconstruction.

- Laborer's Rate

1. Removal of lead paint from any surface NOT to be repainted.
2. Where removal is on a *TOTAL* Demolition project only.

- **PLUMBERS AND PIPEFITTERS**

Installation, repair, replacement, alteration or maintenance of all plumbing, heating, cooling and piping. **License required per Connecticut General Statutes: P-1,2,6,7,8,9 J-1,2,3,4 SP-1,2 S-1,2,3,4,5,6,7,8 B-1,2,3,4 D-1,2,3,4.*

- **POWER EQUIPMENT OPERATORS**

Operates several types of power construction equipment such as compressors, pumps, hoists, derricks, cranes, shovels, tractors, scrapers or motor graders, etc. Repairs and maintains equipment. **License required, crane operators only, per Connecticut General Statutes.*

- **ROOFERS**

Covers roofs with composition shingles or sheets, wood shingles, slate or asphalt and gravel to waterproof roofs, including preparation of surface. (demolition or removal of any type of roofing and or clean-up of any and all areas where a roof is to be relaid.)

- **SHEETMETAL WORKERS**

Fabricate, assembles, installs and repairs sheetmetal products and equipment in such areas as ventilation, air-conditioning, warm air heating, restaurant equipment, architectural sheet metal work, sheetmetal roofing, and aluminum gutters. Fabrication, handling, assembling, erecting, altering, repairing, etc. of coated metal material panels and composite metal material panels when used on building exteriors and interiors as soffits, fascia, louvers, partitions, canopies, cornice, column covers, awnings, beam covers, cladding, sun shades, lighting troughs, spires, ornamental roofing, metal ceilings, mansards, copings, ornamental and ventilation hoods, vertical and horizontal siding panels, trim, etc. The sheet metal classification also applies to the vast variety of coated metal material panels and composite metal material panels that have evolved over the years as an alternative to conventional ferrous and non-ferrous metals like steel, iron, tin, copper, brass, bronze, aluminum, etc. Fabrication, handling, assembling, erecting, altering, repairing, etc. of architectural metal roof, standing seam roof, composite metal roof, metal and composite bathroom/toilet partitions, aluminum gutters, metal and composite lockers and shelving, kitchen equipment, and walk-in coolers. To include testing and air -balancing ancillary to installation and construction.

- **SPRINKLER FITTERS**

Installation, alteration, maintenance and repair of fire protection sprinkler systems.

****License required per Connecticut General Statutes: F-1,2,3,4.***

- **TILE MARBLE AND TERRAZZO FINISHERS**

Assists and tends the tile setter, marble mason and terrazzo worker in the performance of their duties.

- **TRUCK DRIVERS**

~How to pay truck drivers delivering asphalt is under REVISION~

Truck Drivers are requires to be paid prevailing wage for time spent "working" directly on the site. These drivers remain covered by the prevailing wage for any time spent transporting between the actual construction location and facilities (such as fabrication, plants, mobile factories, batch plant, borrow pits, job headquarters, tool yards, etc.) dedicated exclusively, or nearly so, to performance of the contract or project, which are so located in proximity to the actual construction location that it is reasonable to include them. ****License required, drivers only, per Connecticut General Statutes.***

For example:

- Material men and deliverymen are not covered under prevailing wage as long as they are not directly involved in the construction process. If, they unload the material, they would then be covered by prevailing wage for the classification they are performing work in: laborer, equipment operator, etc.
- Hauling material off site is not covered provided they are not dumping it at a location outlined above.
- Driving a truck on site and moving equipment or materials on site would be considered covered work, as this is part of the construction process.

➤ *Any questions regarding the proper classification should be directed to:*
Public Contract Compliance Unit
Wage and Workplace Standards Division
Connecticut Department of Labor
200 Folly Brook Blvd, Wethersfield, CT 06109
(860) 263-6543.

**Connecticut Department of Labor
Wage and Workplace Standards Division
FOOTNOTES**

- ⇒ Please Note: If the "Benefits" listed on the schedule for the following occupations includes a letter(s) (+ a or + a+b for instance), refer to the information below.

Benefits to be paid at the appropriate prevailing wage rate for the listed occupation.

If the "Benefits" section for the occupation lists only a dollar amount, disregard the information below.

**Bricklayers, Cement Masons, Cement Finishers, Concrete Finishers, Stone Masons
(Building Construction) and
(Residential- Hartford, Middlesex, New Haven, New London and Tolland Counties)**

- a. Paid Holiday: Employees shall receive 4 hours for Christmas Eve holiday provided the employee works the regularly scheduled day before and after the holiday. Employers may schedule work on Christmas Eve and employees shall receive pay for actual hours worked in addition to holiday pay.

Elevator Constructors: Mechanics

- a. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day, plus the Friday after Thanksgiving.
- b. Vacation: Employer contributes 8% of basic hourly rate for 5 years or more of service or 6% of basic hourly rate for 6 months to 5 years of service as vacation pay credit.

Glaziers

- a. Paid Holidays: Labor Day and Christmas Day.

**Power Equipment Operators
(Heavy and Highway Construction & Building Construction)**

- a. Paid Holidays: New Year's Day, Good Friday, Memorial day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day, provided the employee works 3 days during the week in which the holiday falls, if scheduled, and if scheduled, the working day before and the working day after the holiday. Holidays falling on Saturday may be observed on Saturday, or if the employer so elects, on the preceding Friday.

Ironworkers

- a. Paid Holiday: Labor Day provided employee has been on the payroll for the 5 consecutive work days prior to Labor Day.

Laborers (Tunnel Construction)

- a. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. No employee shall be eligible for holiday pay when he fails, without cause, to work the regular work day preceding the holiday or the regular work day following the holiday.

Roofers

- a. Paid Holidays: July 4th, Labor Day, and Christmas Day provided the employee is employed 15 days prior to the holiday.

Sprinkler Fitters

- a. Paid Holidays: Memorial Day, July 4th, Labor Day, Thanksgiving Day and Christmas Day, provided the employee has been in the employment of a contractor 20 working days prior to any such paid holiday.

Truck Drivers

(Heavy and Highway Construction & Building Construction)

- a. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas day, and Good Friday, provided the employee has at least 31 calendar days of service and works the last scheduled day before and the first scheduled day after the holiday, unless excused.

AIA® Document A101® – 2017

Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum

AGREEMENT made as of the day of in the year
(In words, indicate day, month and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

Town of West Hartford
50 South Main Street
West Hartford, CT 06107

and the Contractor:
(Name, legal status, address and other information)

for the following Project:
(Name, location and detailed description)

BID# 200042 Whiting Lane Elementary School Main Entrance Security Renovation
47 Whiting Lane
West Hartford, CT

The Architect:
(Name, legal status, address and other information)

Bostwick Architects LLC
73 Woodland Road
Rocky Hill, CT 06067

The Owner and Contractor agree as follows.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

The parties should complete A101®–2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement. AIA Document A201®–2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

ELECTRONIC COPYING of any portion of this AIA® Document to another electronic file is prohibited and constitutes a violation of copyright laws as set forth in the footer of this document.

TABLE OF ARTICLES

- 1 THE CONTRACT DOCUMENTS
- 2 THE WORK OF THIS CONTRACT
- 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
- 4 CONTRACT SUM
- 5 PAYMENTS
- 6 DISPUTE RESOLUTION
- 7 TERMINATION OR SUSPENSION
- 8 MISCELLANEOUS PROVISIONS
- 9 ENUMERATION OF CONTRACT DOCUMENTS

EXHIBIT A INSURANCE AND BONDS

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:

(Check one of the following boxes.)

☒ The date of this Agreement.

☐ A date set forth in a notice to proceed issued by the Owner.

☐ Established as follows:

(Insert a date or a means to determine the date of commencement of the Work.)

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

§ 3.2 The Contract Time shall be measured from the date of commencement of the Work.

§ 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:

(Check one of the following boxes and complete the necessary information.)

[] Not later than () calendar days from the date of commencement of the Work.

[X] By the following date: August 21, 2020

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

Portion of Work	Substantial Completion Date
-----------------	-----------------------------

§ 3.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if any, shall be assessed as set forth in Section 4.5.

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be (\$), subject to additions and deductions as provided in the Contract Documents.

§ 4.2 Alternates

§ 4.2.1 Alternates, if any, included in the Contract Sum:

Item	Price
<u>Base Bid</u>	

§ 4.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement. (Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

Item	Price	Conditions for Acceptance
<u>Base Bid</u>		

§ 4.3 Allowances, if any, included in the Contract Sum:
(Identify each allowance.)

Item	Price

§ 4.4 Unit prices, if any:

(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit (\$0.00)

§ 4.5 Liquidated damages, if any:

(Insert terms and conditions for liquidated damages, if any.)

Liquidated Damages in the amount of \$300.00 (Three Hundred Dollars) per calendar day shall be assessed for the failure to achieve Substantial Completion of the work not later than Commencement Date as stated above and Final Completion of the Work also stated above.

§ 4.6 Other:

(Insert provisions for bonus or other incentives, if any, that might result in a change to the Contract Sum.)

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

§ 5.1.3 Provided that an Application for Payment is received by the Architect not later than the first day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the first Friday after the Fifteenth day of the same month. If an Application for Payment is received by the Architect after the application date fixed above, payment of the amount certified shall be made by the Owner not later than fifteen (15) days after the Architect receives the Application for Payment.
(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Architect may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 In accordance with AIA Document ~~A201™-2017~~, A201™-2007, General Conditions of the Contract for Construction, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.1 The amount of each progress payment shall first include:

- .1 That portion of the Contract Sum properly allocable to completed ~~Work~~; Work as determined by multiplying the percentage completion of each portion of the Work by the share of the Contract Sum allocated to that portion of the Work in the schedule of values, less retainage of Five percent (5 %).
- .2 That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing; and
- .3 ~~That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified.~~ less retainage of Five percent (5 %);

§ 5.1.6.2 The amount of each progress payment shall then be reduced by:

- .1 The aggregate of any amounts previously paid by the Owner;
- .2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document ~~A201-2017~~; A201-2007;
- .3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- .4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document ~~A201-2017~~; A201-2007; and
- .5 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due:

(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

§ 5.1.7.1.1 The following items are not subject to retainage:

(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

§ 5.1.7.2 Reduction or limitation of retainage, if any, shall be as follows:

(If the retainage established in Section 5.1.7.1 is to be modified prior to Substantial Completion of the entire Work, including modifications for Substantial Completion of portions of the Work as provided in Section 3.3.2, insert provisions for such modifications.)

§ 5.1.7.3 Except as set forth in this Section 5.1.7.3, upon Substantial Completion of the Work, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7. The Application for Payment submitted at Substantial Completion shall not include retainage as follows:

(Insert any other conditions for release of retainage upon Substantial Completion.)

§ 5.1.8 If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document ~~A201-2017~~, A201-2007.

§ 5.1.9 Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.2 Final Payment

§ 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 12 of AIA Document ~~A201-2017~~, A201-2007, and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a final Certificate for Payment has been issued by the Architect.

§ 5.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect's final Certificate for Payment, or as follows:

§ 5.3 Interest

Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

(Insert rate of interest agreed upon, if any.)

0.00 % per annum

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Architect will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document ~~A201-2017~~, A201-2007, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker.

(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

§ 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A201-2017, ~~A201-2007~~, the method of binding dispute resolution shall be as follows:

(Check the appropriate box.)

☒ Arbitration pursuant to Section 15.4 of AIA Document ~~A201-2017~~ A201-2007

☐ Litigation in a court of competent jurisdiction

☐ Other *(Specify)*

If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent ~~jurisdiction~~ jurisdiction in Hartford County, Connecticut.

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document ~~A201-2017~~ A201-2007.

§ 7.1.1 If the Contract is terminated for the Owner's convenience in accordance with Article 14 of AIA Document ~~A201-2017~~ A201-2007, then the Owner shall pay the Contractor a termination fee as follows:

(Insert the amount of, or method for determining, the fee, if any, payable to the Contractor following a termination for the Owner's convenience.)

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document ~~A201-2017~~ A201-2007.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document ~~A201-2017~~ A201-2007 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 The Owner's representative:

(Name, address, email address, and other information)

William S. Phibbs, Capital Projects Manager 860-5617523

Town of West Hartford

50 South Main Street

West Hartford, CT 06107

§ 8.3 The Contractor's representative:

(Name, address, email address, and other information)

§ 8.4 Neither the Owner's nor the Contractor's representative shall be changed without ten days' prior notice to the other party.

§ 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in AIA Document A101™-2017, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, Exhibit A, Insurance and Bonds, and elsewhere in the Contract Documents.

§ 8.5.2 The Contractor shall provide bonds as set forth in AIA Document A101™-2017 Exhibit A, and elsewhere in the Contract Documents.

§ 8.6 Notice in electronic format, pursuant to Article 1 of AIA Document A201-2017, A201-2007, may be given in accordance with AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:

(If other than in accordance with AIA Document E203-2013, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

§ 8.7 Other provisions:

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

- 1 AIA Document A101™-2017, Standard Form of Agreement Between Owner and Contractor
- 2 AIA Document A101™-2017, Exhibit A, Insurance and Bonds
- 3 AIA Document A201™-2017, A201™-2007, General Conditions of the Contract for Construction
- 4 AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:

(Insert the date of the E203-2013 incorporated into this Agreement.)

5-3 Drawings

Number

Title

Date

COVER SHEET

CIVIL NOT APPLICABLE

6-ARCHITECTURAL

A-1.0 DEMOLITION PLAN, NOTES

A-1.1 FLOOR PLAN, NOTES

A-1.2 DEMOLITION RCP, REFLECTED CEILING PLAN

A-2.0 INTERIOR ELEVATIONS

A-3.0 DOOR AND FRAME DETAILS

A-4.0 WALL TYPES, LINTEL SCHEDULE, DOOR AND FRAME SCHEDULE, TYPES

A-5.0 FINISH SCHEDULE, MILLWORK DETAILS

A-6.0 MILLWORK DETAILS

STRUCTURAL NOT APPLICABLE

MECHANICAL

M – 0.0 MECHANICAL GENERAL INFORMATION

M – 0.1 MECHANICAL SPECIFICATIONS

M – 1.0 MECHANICAL DEMOLITION FLOOR PLAN

M – 1.1 MECHANICAL FLOOR PLAN

M – 2.0 MECHANICAL DETAILS AND SCHEDULES

ELECTRICAL

E – 0.0 ELECTRICAL LEGENDS AND NOTES

E – 1.0 ELECTRICAL DEMOLITION

E – 1.1 ELECTRICAL LIGHTING AND POWER FLOOR PLAN SPECIFICATIONS

E – 2.0 ELECTRICAL DETAILS

E – 3.0 ELECTRICAL SPECIFICATIONS

FIRE PROTECTION

FP – 1.0 FIRE PROTECTION FLOOR PLAN

.4 Specifications are those contained in the Project Specifications Document Bid#200042 and are as in Section 9.1.8 below.

Section	Title	Date	Pages
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.7—DIVISION 1 GENERAL REQUIREMENTS

Section 01000 SPECIFICATION FORMAT

Section 01010 SUMMARY OF WORK

Section 01019 CONTRACT CONSIDERATIONS

Section 01026 APPLICATION FOR PAYMENT

Section 01039 COORDINATION AND MEETINGS

Section 01045 CUTTING AND PATCHING

Section 01060 REGULATORY REQUIREMENTS

Section 01090 REFERENCES

Section 01120 ALTERNATE PROJECT PROCEDURES

Section 01200 PROJECT MEETINGS

Section 01300 SUBMITTALS

Section 01340 SHOP DRAWINGS AND SAMPLES

Section 01400 QUALITY CONTROL

Section 01500 CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

Section 01600 MATERIALS AND EQUIPMENT

Section 01630 PRODUCT OPTIONS AND SUBSTITUTIONS

Section 01700 CONTRACT CLOSEOUT

Section 01720 PROJECT RECORD

Section 01730 HVAC OPERATION TRAINING MANUAL

Section 01740 GUARANTEES, WARRANTIES, BONDS & MAINTENANCE CONTRACTS

Section 01800 GENERAL STANDARDS

DIVISION 2 SITEWORK – NOT USED

DIVISION 3 CONCRETE – NOT USED

DIVISION 4 MASONRY – NOT USED

DIVISION 5 METAL

Section 05530 SUPPORT SYSTEM FOR SUSPENDED CIELINGS

DIVISION 6 WOOD AND PLASTIC

Section 06100 ROUGH CARPENTRY

DIVISION 7 THERMAL AND MOISTURE PROTECTION

Section 07620 SHEET METAL AND FLASHING TRIM

Section 07920 JOINT SEALERS
DIVISION 8 DOORS AND WINDOWS
 Section 08305 ACCESS DOORS
 Section 08410 ALUMINUM ENTRANCES
 Section 08710 DOOR HARDWARE/DOOR SCHEDULE
 Section 08716 STANLEY AUTOMATIC DOOR ACCESS
 Section 08800 GLAZING
DIVISION 9 FINISHES
 Section 09100 STEEL STUDS
 Section 09260 GYPSUM BOARDS
 Section 09705 ACOUSTICAL CEILINGS
 Section 09705 PAINTING
 Section 09900 SOLID VINYL FLOOR TILE
DIVISION 10 SPECIALTIES
 Section 10200 LOUVERS AND VENTS
 Section 10425 SIGNAGE
DIVISION 11 EQUIPMENT- NOT USED

DIVISION 12 FURNISHING

DIVISION 13 SPECIAL CONSTRUCTION - NOT USED

DIVISION 14 CONVEYING SYSTEMS - NOT USED

DIVISION 15 MECHANICAL - ON DRAWINGS

DIVISION 16 ELECTRICAL - ON DRAWINGS

.5 Addenda, if any:

Number	Date	Pages

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

.6 Other Exhibits:

(Check all boxes that apply and include appropriate information identifying the exhibit where required.)

☐ AIA Document E204™-2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017 incorporated into this Agreement.)

☐ The Sustainability Plan:

Title	Date	Pages

☐ Supplementary and other Conditions of the ~~Contract~~ Contract are those contained in the Project Specifications Document Bid#200042 and are as follows:

Document	Title	Date	Pages

.9- INSTRUCTIONS TO BIDDERS

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(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201™-2017 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)

Contractor's Bid Response attached herein

This Agreement entered into as of the day and year first written above.

OWNER (Signature)

Peter Privitera

(Printed name and title)

CONTRACTOR (Signature)

(Printed name and title)



AIA® Document A201® – 2017

General Conditions of the Contract for Construction

for the following PROJECT:

(Name and location or address)

BID# 200042 Whiting Lane Elementary School Main Entrance Security Renovation
47 Whiting Lane
West Hartford, CT

THE OWNER:

(Name, legal status and address)

Town of West Hartford
50 South Main Street
West Hartford, CT 06107

THE ARCHITECT:

(Name, legal status and address)

Bostwick Architects LLC
73 Woodland Road
Rocky Hill, CT 06067

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

For guidance in modifying this document to include supplementary conditions, see AIA Document A503™, Guide for Supplementary Conditions.

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements.

§ 1.1.2 The Contract

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants, or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

§ 1.1.3 The Work

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 The Project

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by Separate Contractors.

§ 1.1.5 The Drawings

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

§ 1.1.6 The Specifications

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.7 Instruments of Service

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.8 Initial Decision Maker

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.3 Capitalization

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 Interpretation

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

§ 1.6 Notice

§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document

G202™–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 The Owner shall furnish to the Contractor, within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

§ 2.2 Evidence of the Owner's Financial Arrangements

§ 2.2.1 Prior to commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.

§ 2.2.2 Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.

§ 2.2.3 After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.4 Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.

§ 2.3 Information and Services Required of the Owner

§ 2.3.1 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.3.2 The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.3 If the employment of the Architect terminates, the Owner shall employ a successor to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

§ 2.3.4 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.3.5 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.3.6 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

§ 2.4 Owner's Right to Stop the Work

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.5 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.4, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to Section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner and Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. Unless the Architect objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.4 Labor and Materials

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.2 Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

§ 3.6 Taxes

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.7 Permits, Fees, Notices and Compliance with Laws

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 Concealed or Unknown Conditions

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may submit a Claim as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- .1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Architect may notify the Contractor, stating whether the Owner or the Architect (1) has reasonable objection to the proposed superintendent or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.

§ 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Architect's approval. The Architect's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

§ 3.11 Documents and Samples at the Site

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Architect and Owner, and

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delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 Shop Drawings, Product Data and Samples

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment, or workmanship, and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Architect, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of Separate Contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Architect of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such notice, the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will

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specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Architect at the time and in the form specified by the Architect.

§ 3.13 Use of Site

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.14 Cutting and Patching

§ 3.14.1 The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or Separate Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner or a Separate Contractor except with written consent of the Owner and of the Separate Contractor. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Owner or a Separate Contractor, its consent to cutting or otherwise altering the Work.

§ 3.15 Cleaning Up

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 Access to Work

The Contractor shall provide the Owner and Architect with access to the Work in preparation and progress wherever located.

§ 3.17 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications, or other documents prepared by the Owner or Architect. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect.

§ 3.18 Indemnification

§ 3.18.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

ARTICLE 4 ARCHITECT

§ 4.1 General

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

§ 4.1.2 Duties, responsibilities, and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Contractor, and Architect. Consent shall not be unreasonably withheld.

§ 4.2 Administration of the Contract

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of, and will not be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 Communications

The Owner and Contractor shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

§ 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either, and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a Separate Contractor or the subcontractors of a Separate Contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

§ 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Architect may notify the Contractor whether the Owner or the Architect (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner or Architect makes reasonable objection to such substitution.

§ 5.3 Subcontractual Relations

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work that the Contractor, by these Contract Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 Contingent Assignment of Subcontracts

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 Owner's Right to Perform Construction and to Award Separate Contracts

§ 6.1.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each Separate Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

§ 6.2 Mutual Responsibility

§ 6.2.1 The Contractor shall afford the Owner and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a Separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not apparent.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a Separate Contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a Separate Contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or Separate Contractor as provided in Section 10.2.5.

§ 6.2.5 The Owner and each Separate Contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, Separate Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor, and Architect. A Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

§ 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor, and Architect stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

§ 7.3 Construction Change Directives

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.4.

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

- .1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Architect;
- .2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and
- .5 Costs of supervision and field office personnel directly attributable to the change.

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

§ 7.3.6 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.7 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 Minor Changes in the Work

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Architect that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

ARTICLE 8 TIME

§ 8.1 Definitions

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 Delays and Extensions of Time

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.1.2 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 9.2 Schedule of Values

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Architect before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Architect. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. Any changes to the schedule of values shall be submitted to the Architect and supported by such data to substantiate its accuracy as the Architect may require, and unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

§ 9.3 Applications for Payment

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner or Architect require, such as copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage, and transportation to the site, for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials, and equipment relating to the Work.

§ 9.4 Certificates for Payment

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Architect. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;

- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a Separate Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

§ 9.5.3 When the reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.4 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Contractor shall reflect such payment on its next Application for Payment.

§ 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

§ 9.6.5 The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.6.8 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

§ 9.7 Failure of Payment

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents, the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor, and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- .1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents;
- .3 terms of special warranties required by the Contract Documents; or
- .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, or a supplier, shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 Safety of Persons and Property

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

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- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

§ 10.2.2 The Contractor shall comply with, and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 Injury or Damage to Person or Property

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 Hazardous Materials and Substances

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and Architect of the condition.

§ 10.3.2 Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor and the Architect will

promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall reimburse the Contractor for all cost and expense thereby incurred.

§ 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Architect, and Architect's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.

§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 11.1.3 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance. Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner of such impending or actual cancellation or

expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

§ 11.2 Owner's Insurance

§ 11.2.1 The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

§ 11.2.2 Failure to Purchase Required Property Insurance. If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform the Contractor in writing prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

§ 11.2.3 Notice of Cancellation or Expiration of Owner's Required Property Insurance. Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

§ 11.3 Waivers of Subrogation

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

§ 11.3.2 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance

The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor and Architect for loss of use of the Owner's property, due to fire or other hazards however caused.

§11.5 Adjustment and Settlement of Insured Loss

§ 11.5.1 A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.2. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

§ 11.5.2 Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during

that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.5.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner or Separate Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 Acceptance of Nonconforming Work

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.

§ 13.3 Rights and Remedies

§ 13.3.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

§ 13.3.2 No action or failure to act by the Owner, Architect, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

§ 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 13.4.2 If the Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Architect's services and expenses, shall be at the Contractor's expense.

§ 13.4.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.4.5 If the Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.4.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.5 Interest

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate the parties agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- .4 The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees or any other persons or entities performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, and upon certification by the Architect that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.3 Suspension by the Owner for Convenience

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- .1 that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;

- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

§ 15.1.2 Time Limits on Claims

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

§ 15.1.5 Claims for Additional Cost

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on the scheduled construction.

§ 15.1.7 Waiver of Claims for Consequential Damages

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit, except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 Initial Decision

§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

§ 15.3.4 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 15.4 Arbitration

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 15.4.4 Consolidation or Joinder

§ 15.4.4.1 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as those of the Owner and Contractor under this Agreement.

GENERAL

A. RELATED DOCUMENTS

AIA Document A 201 "General Conditions of the Contract for Construction", (Sixteenth Edition, Copyright 2007, The American Institute of Architects, Articles 1 through 15) and the Town of West Hartford's Supplementary General Conditions (Section 00402 Articles 1-15) are bound herein, and are hereby made a part of the Contract Bidding Documents and shall apply to all Contractors and Subcontractors.

B. AMENDMENTS TO THE GENERAL CONDITIONS

- a. The Supplementary General Conditions include:
 - 1. Any and all revisions to, deletions from, replacement of, and additions to portions of the AIA General Conditions, Articles 1 through 15.
 - 2. Such additional articles beyond Article 15 as may be included herein.
- b. Certain articles of the AIA General Conditions, or portions thereof, are revised by, are deleted, are replaced by, or are supplemented by the requirements of the following Supplementary Conditions. Such revisions, deletions, replacements, or additions shall take precedence over the AIA General Conditions.
- c. Where any such Article is revised, deleted, or replaced, the provisions of such Article not so specifically revised, deleted or replaced shall remain in effect.
- d. The following paragraphs are numbered in sequence corresponding to those of the General Conditions. Revised paragraphs and clauses have the same numerical designations occurring in the General Conditions. Additions to paragraphs, subparagraphs and clauses are numbered in sequence.

ARTICLE 1 – GENERAL PROVISIONS

- 1.1.1 Delete the word "not" on line 7 so that the sentence begins "The Contract Documents do include."
- 1.1.3 Add the following words after the word "obligations" in line 3:

or to be provided by Subcontractors, material suppliers, or any other entity for whom the Contractor is responsible under or pursuant to the Contract Documents.
- 1.2.4 Add new subparagraph 1.2.4 as follows:

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In case of any conflict or inconsistency among the Contract Documents, the Architect's decision shall govern. If there is any inconsistency in the Drawings, or between the Drawings and the Specifications, unless otherwise ordered in writing by the Architect or the Owner, the Contractor shall provide the better quality of, or the greater quantity of, work or materials.

1.2.5 Add new subparagraph 1.2.5 as follows:

Where a typical or representative detail is shown on the Drawings, such detail shall constitute the standard of workmanship and materials throughout corresponding portions of the Work. Where necessary, the Contractor shall adopt such detail for use in said corresponding portions of the Work in a manner that is satisfactory to the Architect.

1.5.1 Add the following after the first sentence:

Such drawings, specifications, other documents and copies thereof are and shall remain the joint property of the Architect and Owner.

ARTICLE 2 - OWNER

2.2.1 Delete third and forth sentences.

2.2.2 Add the following at the end of 2.2.2 "unless otherwise provided in the contract documents."

2.2.3 Delete the words "and utility locations" on line 1.

2.2.4 Delete the second sentence of 2.2.4.

2.2.5 Delete subparagraph 2.2.5 in its' entirety and substitute with the following:

The Contractor will be furnished up to fifteen (15) sets of the Contract Bidding Documents at no charge.

2.3 Change subparagraph 2.3 as follows:

Delete the word "repeatedly" in line 2.
Add the following at the end of 2.3:

The Owner's right to order the Contractor to stop the Work shall not relieve the Contractor of any of his responsibilities and obligations under or pursuant to the Contract Documents.

2.5 Add new paragraph 2.5 as follows:

2.5 - Additional Rights

The rights stated in Article 2 shall be in addition to and shall not be in limitation of any other rights of the Owner granted in the Contract Documents or at law or in equity.

ARTICLE 3 - CONTRACTOR

3.2.2 Delete subparagraph 3.2.2 in its' entirety and substitute with the following:

The Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by the Owner pursuant to subparagraph 2.2.3 and 3.2.3 and shall at once report to the Architect errors, inconsistencies or omissions discovered, or any variance from applicable laws, statutes, ordinances, building codes, rules, regulations or any lawful orders of any governmental body, or public or quasi-public authority. The Contractor shall not be liable to the Owner or Architect for damage resulting from errors, inconsistencies or omissions in the Contract Documents unless the Contractor recognized or should have recognized such error, inconsistency or omission and failed to report it to the Architect. If the Contractor performs any construction activity knowing it involves a recognized error, inconsistency or omission in the Contract Documents without such notice to the Architect, the Contractor shall assume responsibility for such performance and shall bear an appropriate amount of the attributable costs for correction.

3.2.3 Delete subparagraph 3.2.3 in its' entirety and substitute with the following:

The Contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing activities. Errors, inconsistencies or omissions discovered shall be reported to the Architect at once. After reporting to the Architect any error, inconsistency or omission the Contractor may discover in the Contract Documents, the Contractor shall not proceed with any work so affected without the Architect's written modifications to the Contract Documents.

3.2.4 Delete subparagraph 3.2.4 in its' entirety and substitute with the following:

The Contractor shall fully comply, or assure full compliance by Subcontractors or others under his direction, with Connecticut General Statutes Section 16-345, et seq. ("Call Before You Dig") and the regulations pertaining thereto. The Contractor shall be responsible to make certain of the exact location of the public and private mains, ducts, poles and utility services prior to excavation. The utility mains, ducts,

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poles and services in the construction area where referred to on the Project plans or elsewhere in the Contract Documents are at the approximate locations furnished by various Utilities concerned. These locations are subject to possible errors in the source of the information and also errors in transcription. Connecticut General Statutes Section 16-349, as amended, makes it mandatory to notify Utilities of any proposed excavation, discharge of explosives, or demolition within the purview of Connecticut General Statutes Section 16-345, et seq. The Contractor shall call 1-800-922-4455 (toll free), 7:00 A.M. to 6:00 P.M., Monday through Friday, at least forty-eight hours prior to beginning the excavation, discharge of explosives, or demolition. The Owner shall be notified in a similar manner. This "Call Before You Dig" service is provided by the Utility companies. Once the call is made, it is the utilities' responsibility to analyze the site and identify and mark their underground facilities. Privately or Town-owned utility mains, ducts, poles and services may be located in the construction area and the Contractor shall contact the Architect to verify their existence and location.

- 3.3.1 Delete the last sentence of subparagraph 3.3.1 and add the following:

Should the Contractor fail to perform his work to the satisfaction of the Architect and Owner, the Architect and Owner have the right to order that all work must stop until the work is rectified.

- 3.3.4 Add new subparagraph 3.3.4 as follows:

The Contractor will be required to attend weekly Project Meetings from the time the Agreement is executed until Final Acceptance.

- 3.4.4 Add new subparagraph 3.4.4 as follows:

The Contractor is encouraged to use local labor where feasible, but not when it is at the expense of poor workmanship and/or higher costs. The Contractor shall not discriminate or permit discrimination in employment or in the award of sub-contracts or in the selection of materials suppliers, in any manner prohibited by the laws and regulations of the United States, the State of Connecticut or the Town of West Hartford.

- 3.5 Add the words "or Owner" after the word "Architect" in line 8.

- 3.6 Delete subparagraph 3.6 in its' entirety and substitute the following:

No amount shall be included in the Bid for Connecticut Sales or Service Taxes or for Federal Excise Tax on materials or supplies purchased for this project. If applicable, the owner shall provide tax exempt documentation for the contractor's records.

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3.7.2 Add the following sentence: A copy of the State license for general and major Subcontractors issued in accordance with C.G.S Section 20-341gg shall be furnished to the Owner upon request.

3.7.4 Add the following before the word "If" on line 1: "Except as in regards to claims relating to hazardous materials which are discussed in Article 3.7.8.."

Line 6, place a period after disturbed and delete rest of sentence.

If the Contractor performs work contrary to laws, statutes, ordinances, building codes, and rules and regulations, the Contractor shall assume responsibility for such work and shall bear the costs attributable to correction.

3.7.6 Add new subparagraph 3.7.6 as follows:

The requirements of subparagraphs preceding do not waive the Contractor's responsibility of complying with the requirements of the contract documents, when such regulations and requirements exceed those of any laws, ordinances, rules, regulations, and orders of any public authority bearing on the work.

3.7.7 Add new subparagraph 3.7.7 as follows:

The Town of West Hartford Building Permit Fee will be waived, however, the General Contractor must apply for the Building Permit, and in all other ways comply with procedures of the office of the Building Official for the Town of West Hartford.

3.7.8 Add new subparagraph 3.7.8 as follows:

The Owner and Architect shall bear no responsibility to the Contractor, or sub-contractor(s) for any delay damages claimed to have resulted from activities claimed to relate to the detection, abatement, or handling of hazardous materials known to exist or subsequently discovered upon the premises. The sole remedy of the Contractor under such circumstances shall be an appropriate extension of contract completion time. No damages shall be paid by the Architect or Owner, their agents, servants or independent Contractors as a result of any such claim.

3.12.10 Delete the word "properly" in line 9 and substitute the word "Connecticut".

3.17 Delete subparagraph 3.17 and substitute with the following:

The Contractor shall pay all royalties and license fees. The Contractor shall defend all suits or claims for infringement of any copyrights and patent rights and shall hold the Owner harmless from loss (including, but not limited to, attorneys' fees and any litigation expenses) unless a particular design, process or the product of a particular

manufacturer or manufacturers is specified in the Contract Documents or where copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Architect; provided, however, that if the Contractor has reason to believe that the design, process or product specified is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless the Contractor promptly gives such information to the Architect and Owner.

- 3.18.1 Delete subparagraph 3.18.1 in its entirety and replace the original language with the attached Indemnification and Insurance Exhibit which shall be fully incorporated by reference into this Agreement:

ARTICLE 4 - ARCHITECT

- 4.1.2 Delete subparagraph 4.1.2 in its' entirety and substitute the following:

Duties, responsibilities and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified or extended without written agreement of the Owner and Architect. The Contractor shall be notified of such restriction, modification or extension in writing.

- 4.1.3 Delete the words "as to whom the Contractor makes no reasonable objection and".

ARTICLE 5 - SUB-CONTRACTORS

- 5.2.1 Delete the word "after" on the second line and substitute with the words "prior to" award.

- 5.2.3 Delete subparagraph 5.2.3 in its entirety and substitute the following:

If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If no suitable substitute is agreed upon, the Owner will allow the Contractor to withdraw its bid without penalty.

ARTICLE 6 - CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

- 6.1.1 Add the word "unreasonable" before the word "delay" in the last sentence, line 4.

- 6.1.4 Delete subparagraph 6.1.4 in its' entirety.

- 6.2.3 Delete the second sentence of subparagraph 6.2.3.

6.2.4 Delete the word "wrongfully" on line 1.

ARTICLE 7 - CHANGES IN THE WORK

7.3.3 Delete subparagraph 7.3.3.1 - 7.3.3.4 and substitute with the following:

- .1 Unit prices stated in the Contract Documents or subsequently agreed upon.
- .2 In the absence of unit prices, the mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation, to be determined as follows:
 - A. The cost of labor performed and material used by the Contractor with his own forces.
 - B. The cost of Worker's Compensation, Federal Social Security, and Connecticut Unemployment Compensation at established rates, actual additional cost of payment and performance bonds.
 - C. Actual cost of rental rates for equipment (exclusive of hand tools) employed and used directly on the work.
 - D. Fifteen percent (15%) of (A), (B), and (C) above mentioned for overhead, superintendence and profit. However, if the work to be performed results in a credit to the Owner, no percentage of overhead and profit will apply.
 - E. On work to be performed by a Subcontractor, the Contractor's allowance, for overhead superintendence and profit, is to be ten percent (10%) applied to total cost of Subcontractor's work, including his allowance as per paragraph G.
 - F. On any changes involving the Contractor, Subcontractor or any Contractor of theirs, their total cost and/or omissions shall be combined as one before the application of the percentage allowed for the Contractor's overhead, superintendence and profit in accordance with paragraph E above.
 - G. On work to be performed by a Subcontractor, the Subcontractor's allowance is to be fifteen percent (15%) for his overhead, superintendence and profit applied to paragraphs A, B, and C.

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- H. The Contractor, when performing the work under A, B and C above shall, when requested, promptly furnish in a form satisfactory to the Owner, itemized statements of the cost of the work so ordered, including but not limited to, certified payrolls and copies of accounts, bills and vouchers to substantiate the above estimates.

7.3.4 Delete the word "shall" in line 4 and substitute the word "may".

7.3.7 Delete subparagraph 7.3.7 and substitute with the following:

If the Contractor does not respond promptly or disagrees with the method of adjustment in the Contract Sum, the method and adjustment shall be determined by the Architect in accordance with subparagraph 7.3.3. Under subparagraph 7.3.3 the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data.

7.3.8 Add the following sentence at the beginning of subparagraph 7.3.8:

"Pending final determination of cost to the Owner, amounts not in dispute may be included in Application for Payment."

7.3.9 Delete subparagraph 7.3.9 in its' entirety and substitute the following:

"If the Owner and Contractor do not agree with the adjustment in Contract Time or the method for determining it, the adjustment or the method shall be referred to the Architect for determination."

ARTICLE 8 - TIME

8.2.1 Delete second sentence only and change to read as follows:

By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work and that he is capable of properly completing the Work within the Contract Time.

8.3.1 Delete the words "and arbitration" on line 4 and substitute with the words "or resolution of claims or disputes".

ARTICLE 9 – PAYMENTS AND COMPLETION

9.2 Add the words "and the Owner" after the word Architect on line 2 and add the words "or the Owner" after the word Architect on line 4.

9.2.1 Add subparagraph 9.2.1 as follows:

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The Schedule of Values to be submitted by the Contractor, will include, as a minimum, a separate line item for each Division of the Specifications. Any allowances called for in the Drawings and Specifications will be shown as a separate line item. Additional items to be listed may be required by the Architect.

9.3.1 Delete subparagraph 9.3.1 in its' entirety and substitute with the following:

Not later than the first day of each calendar month, the Contractor shall submit to the Architect an itemized Application for Payment for work performed during the previous month, notarized, supported by such data substantiating the Contractor's

right to payment as the Owner or the Architect may require, and reflecting retainage, if any, as provided elsewhere in the Contract Documents.

9.3.1.1 Delete 9.3.1.1 in its' entirety and substitute with the following:

In order to expedite monthly payments during the course of the project, the Contractor shall, no later than the first day of the month, review with the Architect and Owner a preliminary draft of the Application for Payment to assure agreement with the Contractor before final copies of the Application are typed and formally submitted. The Architect shall then review the Contractor's formal Application for Payment and certify in writing in accordance with Section 9.4, the total value of work done, including an allowance for the value of materials delivered and suitably stored at the site to the time of such estimate. The Owner shall retain five (5) percent of such estimated value until a maximum of five (5) percent of the Agreement sum has been retained, said retainage to be held by the Owner as part security for the fulfillment of the Agreement by the Contractor. Final payment, including the retainage, shall be due thirty (30) days after final completion of the work, provided the work be then fully completed and the Agreement fully performed.

9.3.3 Delete subparagraph 9.3.3 in its' entirety and substitute with the following:

The Contractor warrants that title to all work covered by an Application for Payment, except materials and equipment suitably stored on or off the site, will pass to the Owner no later than the time of payment. However, title to materials and equipment suitably stored on or off site shall not pass to the Owner until such time as said materials and equipment are properly installed by the Contractor even though payment for such materials and equipment may have been previously effected. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor,

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materials and equipment relating to the Work. This provision may not be explained, supplemented, or modified by a course of dealing, a usage of trade, a course of performance or other interpretation that may arise out of the commercial context in which this provision is used.

9.4.1 Delete subparagraph 9.4.1 in its' entirety and substitute with the following:

The Architect, will, not later than the seventh (7th) day of each calendar month, either issue and deliver to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determined is properly due, or notify the Contractor and Owner in writing the Architect's reasons for withholding a Certificate as provided in sub-paragraph 9.5.1.

9.4.3 Add new subparagraph 9.4.3 as follows:

If the Application for Payment discloses any problems, the Architect shall immediately bring such problems to the Owner's attention.

9.5.1 Delete the word "reasonably" in line 1; delete the words "in the Architect's opinion" in lines 2 and 8; delete the word "repeated" in sub-subparagraph 9.5.1.7.

9.5.2 Add the following to subparagraph 9.5.2:

The Owner shall not be deemed in default by reason of withholding payment while any of the above grounds remain uncured as stated in paragraph 9.5.1.

9.5.4 Add new subparagraph 9.5.4 as follows:

No interest is to be allowed or paid by the Owner upon any monies retained under the provisions of this Contract.

9.6.1 Delete subparagraph 9.6.1 in its' entirety and substitute with the following:

After the Architect has issued a Certificate for Payments, the Owner shall make payment to the Contractor not later than the first Friday after the 15th day of the calendar month during which the Application has been submitted. Delays in submitting the application for payment in accordance with subparagraph 9.3.1 above will result in a corresponding delay in payment.

9.7 Delete the word "seven" on lines 1, 2 and 4 and replace with the word "fourteen" on both lines. Delete the words "plus interest as provided for in the Contract Documents" on line 7.

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9.8.2 Change subparagraph 9.8.2 as follows:

In line 1, add the words "and Architect" after the word "Owner" and change the word "agrees" to "agree" in line 1. Add the words "and Owner" after the word "Architect" on line 3.

9.8.3 Insert the words "and Owner" after the word "Architect" on lines 1 and 6. Insert the words "and Owner's" after the word "Architect's" on line 2.

9.8.5 Delete subparagraph 9.8.5 in its' entirety and substitute the following:

"The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon Substantial Completion of the Work or designated portion thereof and upon application by the Contractor and certification by the Architect, the Owner shall make payment reflecting adjustments in retainage, if any, for such work or portion thereof as provided in the Contract Documents."

9.10.1 Add the words "and Owner" on both lines 2 and 3 after the word "Architect".

9.10.2 Delete subparagraph 9.10.2 in its' entirety and substitute with the following:

Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect in a form satisfactory to the Owner (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days after written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) final prints for record drawing use marked by the Contractor with record information as set forth in the Contract Documents, (6) a final sworn statement from the Contractor duly executed and acknowledged showing all Subcontractors to be fully paid and similar sworn statements from Subcontractors and, where appropriate, from Sub-Subcontractors, (7) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor or Sub-Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, or is not bonded over as provided in the preceding sentence, the Contractor shall promptly

pay to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

ARTICLE 10 - PROTECTION OF PERSONS AND PROPERTY

10.2.1.4 Add the following as new sub-subparagraph 10.2.1.4:

the environment, including, without limitation, air, water, land, including wetlands, and other natural resources, and plant and animal life of all types.

10.2.2 Delete subparagraph 10.2.2 in its' entirety and substitute with the following:

The Contractor shall give notices and comply with applicable laws (including, without limitation, the requirements of Connecticut General Statutes Section 31-40m relating to toxic substances and the requirements of the Occupational Safety and Health Act and the Construction Safety Act of 1969, as amended, and regulations and standards promulgated thereunder), ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or the environment or their protection from damage, injury, destruction, pollution or loss. Said laws, ordinances, rules, regulations, standards, and lawful orders are incorporated herein by reference.

10.2.2.1 Add new sub-subparagraph 10.2.2.1 as follows:

The Contractor shall be directly responsible for compliance therewith on the part of its agents, employees, materialmen and Subcontractors and shall directly receive and be responsible for all citations, assessments, fines or penalties which may be incurred by reason of its agents', employees', materialmen's or Subcontractors' failure to so comply.

10.2.4 Add the following to subparagraph 10.2.4:

The Contractor shall comply fully and require compliance with all applicable laws, including Connecticut General Statutes Sec. 16-345, et. seq., and the regulations promulgated thereunder, relating to discharge of explosives.

10.2.5 Add the number "10.2.1.4" after the number "10.2.1.3" on lines 2 and 5.

10.2.8 Delete the number "21" in line 4 and replace with the number "10".

10.2.9 Delete the number "21" in line 4 and replace with the number "10".

Add new subparagraph 10.2.9 as follows:

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The Contractor shall be responsible for the adequate strength and safety of all scaffolding, staging and hoisting equipment and for temporary shoring, bracing and tying.

10.2.10 Add new subparagraph 10.2.10 as follows:

The Contractor shall protect all streets, roads and sidewalks and shall make all necessary repairs at his own expense, and shall maintain these reasonably clean of dirt, mud or other debris that is due to the construction operation.

10.2.11 Add new subparagraph 10.2.11 as follows:

It shall be the Contractor's responsibility to protect finished sidewalks and curbs against damage caused by trucks, etc., driving over them. If they are damaged they must be replaced by the Contractor without cost to the Owner.

10.2.12 Add new subparagraph 10.2.12 as follows:

The Contractor shall furnish approved hard hats, other personal protective equipment as required, approved first aid supplies, name of first aid attendant and a posted list of emergency facilities.

10.3.2 Delete subparagraph 10.3.2 in its' entirety and substitute with the following:

The Owner shall obtain the services of a licensed laboratory to verify the presence of absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to verify that it has been rendered harmless. When the material or substance has been rendered harmless, work in the affected area shall resume. The Contract Time may be extended appropriately.

10.3.3 Delete subparagraph 10.3.3 in its' entirety.

10.3.4 Insert a period after the word "Site" on line 2 and delete the rest of the paragraph.

10.3.6 Delete paragraph 10.3.6 in its' entirety.

ARTICLE 11 - INSURANCE AND BONDS

11.1.2 – 11.3.10 Delete subparagraphs 11.1.2 through 11.3.10 in their entirety and replace them with the attached Indemnification and Insurance Exhibit which shall be fully incorporated by reference into this Agreement.

11.4.3 Add new subparagraph 11.4.3 as follows:

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The Contractor shall increase the principal amount of the performance and labor and materials payments bond(s) in direct proportion to any increase in the value of the Contract resulting from such change orders.

11.4.4 Add new subparagraph 11.4.4 as follows:

Bonds furnished by the Contractor shall comply with all relevant Connecticut statutes including Conn. Gen. Stat. Sec. 49-41.

ARTICLE 12 - UNCOVERING AND CORRECTION OF WORK

12.1.1 Add the words "or Owner's" after the word "Architect's" in lines 1 and 3. Add the words "or Owner" after the word "Architect" in line 2.

12.1.2 Add the words "or Owner" after the word "Architect" on lines 1 and 2.

12.2.2 Delete sub-subparagraphs 12.2.2.1, 12.2.2.2 and 12.2.2.3 in their entirety and substitute with the following:

12.2.2 If, within one year after the date of final completion of the Work or designated portion thereof, or after the date for commencement of warranties established under subparagraph 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly at the Contractor's sole expense after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. This period of one year shall be extended with respect to portions of Work first performed after final completion, by the period of time between final completion and the actual performance of the Work. This obligation under this subparagraph 12.2.2 shall survive acceptance of the Work under the Contract and termination of the Contract. The Owner shall give such notice promptly after discovery of the condition.

ARTICLE 13 - MISCELLANEOUS PROVISIONS

13.1 Add the following to the end of subparagraph 13.1:

The Work shall comply with all applicable laws, statutes, ordinances, codes, rules, regulations or orders during its performance and its completion.

13.4.1 Delete the words "by law" in line 3 and substitute with the words "at law or in equity".

13.4.3 Add new subparagraph 13.4.3 as follows:

No provision contained in the Contract Documents shall create or give to third parties any claim or right of action against the Owner or the Contractor except as specifically provided herein.

13.5.1 Delete subparagraph 13.5.1 in its' entirety and substitute with the following:

If the Contract Documents, or any laws, ordinances, building codes, rules, regulations or orders of any governmental body or public or quasi-public authority having jurisdiction over the Work or the site of the Project require any portion of the Work to be inspected, tested or approved, the Contractor shall give the Architect and the Owner timely notice thereof so Architect and Owner may observe such inspection, testing or approval. The Contractor shall bear all costs of such inspections, test or approvals except where the Contract Documents provide otherwise.

13.6 Delete subparagraph 13.6 in its' entirety.

13.7 Delete paragraph 13.7 in its' entirety.

13.8 CAPTIONS

13.8. The captions and headings of various Articles and Paragraphs in the Contract Documents are for convenience only and are not to be construed as defining or limiting, in any way, the scope or intent of the provisions hereof.

13.9 Add a new Paragraph 13.9 as follows:

13.9 SEVERABILITY

13.9 The invalidity of any covenant, restriction, condition, limitation in any other part or provision of the Contract Documents shall not impair or affect in any manner the validity, enforceability or effect of the remainder of the Contract Documents.

13.10 Add a new Paragraph 13.10 as follows:

In the event of any unavoidable cause beyond the control of the parties, whether natural or man-made, which renders the performance of this contract impossible, the contract shall be terminated. Such occurrences shall include, without limitation, death of the Contractor (in the event that the Contractor is a sole proprietor); destruction of all, or a major portion of the Contractor's equipment; legal order by a court of competent jurisdiction, or referendum barring performance of the contract;

war, famine, flood, plague, pestilence or act of God. Any amounts due to either party by the other as the result of actions taken pursuant to the contract prior to the occurrence which renders performance impossible shall be paid, but no further sums shall be due from either party to the other, by way of damages for the termination of the contract.

13.11 Add new paragraph 13.11 as follows:

The Contractor shall comply with Section 12-43 of the Connecticut General Statutes as may be amended.

Sec. 12-43. Property of nonresidents. All owners of real estate, or of tangible personal property located in any town for three months or more during the assessment year immediately preceding any assessment day, who are nonresidents of such town, shall file lists of such real estate and personal property with the assessors of the town in which the same is located on such assessment day, if located in such town for three months or more in such year, otherwise, in the town in which such property is located for the three months or more in such year nearest to such assessment day, under the same provisions as apply to residents, and such personal property shall not be liable to taxation in any other town in this state. The list of each nonresident taxpayer shall contain his post-office and street address. The assessors shall mail to each nonresident, or to his attorney or agent having custody of his taxable property, at least fifteen days before the expiration of the time for filing lists, blank forms for filing lists of such property. The lists of taxable property of nonresidents shall be arranged in alphabetical order and separate from the lists of residents, provided no such separation shall be necessary in any town the board of assessors of which, upon the request of its property tax collector, has made rules and regulations approved by the secretary of the office of policy and management setting up an alternative method of arrangement.

ARTICLE 14 - TERMINATION OR SUSPENSION OF THE CONTRACT

14.1.1 Delete the number "30" on line 1 and substitute with the number "60".

14.1.3 Delete subparagraph 14.1.3 in its entirety and substitute with the following:

If one of the reasons described in subparagraph 14.1.1 or 14.1.2 exists, the Contractor may, upon seven additional days written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for work executed.

14.2.1 Delete subparagraph 14.2.1 in its' entirety and substitute with the following:

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- 14.2.1 The Owner may terminate the Contract for any of the following causes:
- 14.2.1.1 If the Contractor shall institute or consent to proceedings requesting relief or arrangement under the Federal Bankruptcy Act or any similar or applicable federal or state law or if a petition under any federal or state bankruptcy or insolvency law is filed against the Contractor and such petition is not dismissed within sixty (60) days from the date of said filing, or if the Contractor admits in writing his inability to pay his debts generally as they become due, or if he makes a general assignment for the benefit of his creditors, or if a receiver, liquidator, trustee or assignee is appointed on account of his bankruptcy or insolvency; or
- 14.2.1.2 If a receiver of all or any substantial portion of the Contractor's properties is appointed; or
- 14.2.1.3 If the Contractor abandons the Works; or
- 14.2.1.4 If the Contractor fails to prosecute the Work promptly and diligently; or
- 14.2.1.5 If the Contractor fails or refuses to supply enough properly skilled workers or proper materials for the Work; or
- 14.2.1.6 If the Contractor submits an Application for Payment, sworn statement, waiver of lien, affidavit or document of any nature whatsoever which is intentionally falsified; or
- 14.2.1.7 If the Contractor fails to make prompt payment to Subcontractors or for materials or labor or otherwise breaches his obligations under any Subcontract with a Subcontractor; or
- 14.2.1.8 If a mechanic's or materialman's lien or notice of lien is filed against any part of the Work or the site of the Project and not promptly bonded or insured over by the Contractor in a manner satisfactory to the Owner; or
- 14.2.1.9 If the Contractor disregards any laws, statutes, ordinances, rules, regulations or orders of any governmental body or public or quasi-public authority having jurisdiction of the Work or the site of the Project; or

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14.2.1.10 If the Contractor otherwise substantively violates any provision of the Contract Documents.

14.2.2.1 Delete the semicolon after "Contractor" in line 2 and add:

and may request that the Contractor remove any part or all of his equipment, machinery, and supplies from the site of the Project within seven (7) days from the date of such request, and in the event of Contractor's failure to do so, may remove or store such equipment, machinery and supplies at the Contractor's expense;

14.2.4 Delete subparagraph 14.2.4 in its' entirety and substitute with the following:

If the unpaid balance of the Contract Sum exceeds all costs to the Owner of completing the Work, then the Contractor shall be paid for all Work performed by the Contractor to the date of termination. If such costs to the Owner of completing the Work exceed such unpaid balance, the Contractor shall pay the difference to the Owner immediately upon the Owner's demand. The costs to the Owner of completing the Work shall include (but not be limited to) the cost of any additional architectural, managerial and administrative services required thereby, any costs incurred in retaining another Contractor or other Subcontractors, any additional interest or fees which the Owner must pay by reason of a delay in completion of the Work, attorney's fees and expenses, and any other damages, costs and expenses the Owner may incur by reason of completing the Work or any delay thereof. The amount, if any, to be paid to the Owner or Contractor shall be certified by the Architect, upon application, in the manner provided in Paragraph 9.4, and this obligation for payment shall survive the termination of the Contract".

14.3.2 In line 1, delete "shall" and insert "may".

14.4.3 On line 2, insert a period after the word "termination" and delete the remaining words on lines 2 and 3.

ARTICLE 15 – CLAIMS AND DISPUTES

15.1.2 Delete the number "21" in line 4 and replace with the number "10".

15.2.1 Delete subparagraph 15.2.1 and substitute the following:

Decision of Architect. Claims, including those alleging an error or omission by the Architect, shall be referred initially to the Architect for decision. A decision by the Architect shall be required as a condition precedent to mediation, litigation or other formal method of dispute resolution of all Claims between the Contractor and the Owner arising prior to the date final payment is due, unless no decision has been

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rendered by the Architect within 45 days of referral of the Claim to the Architect or the Architect fails to provide a decision as scheduled in subparagraphs 15.2.2 through 15.2.5, whichever is later.

15.2.2 On line 4 add the word “or” after the word “Claim,” and add a period after the word “compromise.” Delete the balance of the paragraph after the word “compromise”.

15.2.3 On lines 3 and 4 replace the words “Owner” and “Owner’s” with “claimant” and “claimant’s”.

15.2.4 Delete the last sentence of subparagraph 15.2.4 and substitute the following:

“Within 10 days of receipt of the response or supporting data, if any, the Architect will either reject or approve the claims in whole or in part, or suggest a compromise.”

15.2.5 Delete the second sentence of subparagraph 15.2.5.

15.2.9 Add new subparagraph 15.2.9 as follows:

If a claim has not been resolved after consideration of steps described in subparagraphs 15.2.1 through 15.2.5, then the parties shall make an additional good faith effort to resolve the claim through an informal dispute resolution process mutually agreeable to the parties. If the claim is still not capable of resolution within ten days or such other time period that is mutually agreed upon, the parties may proceed to arbitration, litigation, or formal alternate dispute resolution.

15.2.10 Add new subparagraph 15.2.10 as follows:

If no form of dispute resolution is mutually agreed upon, no party may compel arbitration, mediation or alternate dispute resolution, and the parties may pursue whatever legal remedies are available to them.

15.3 (15.3.1 – 15.3.3) Delete in its' entirety.

15.4 (15.4.1 – 15.4.3) Delete in its' entirety.

END OF SUPPLEMENTARY GENERAL CONDITIONS

SPECIFICATIONS FORMAT

1.1 FORMAT

- A. These Specifications generally follow the Construction Specifications Institute format:

Divisions
Sections
Articles
Paragraphs
Subparagraphs

- B. Generally each Section, except for Division 1 Sections, is divided into three (3) parts:

Part 1 - General
Part 2 - Products
Part 3 - Execution

Note: Certain Sections may contain a "Part 4 – Schedules".

1.2 LANGUAGE

- A. The Specifications language is written using both indicative mood and imperative mood.

Where the imperative mood is used, the language is directed to the Contractor, unless specifically indicated otherwise.

- B. Where a colon (:) is used after a subject, the phrase "shall be" (or variations thereof) is to be inferred.

- C. Where the word "provide" is used, the meaning shall be that the item or product shall be "furnished, delivered, and installed/erected/applied/connected for its intended use and as required for the completed Work."

- D. Instruction Terms

Wherever reference is made in the Contract to the Work or its performance, the terms "directed", "required", "permitted", "ordered", "designated", "prescribed", and words of similar import shall imply the direction, requirement, permission, order, designation or prescription of the intent of the documents

- E. Approval and Acceptance Terms

"Approved", "acceptable", "satisfactory" and words of similar import shall mean and intend: approved by, acceptable to, or satisfactory to, the Architect.

1.3 CONTRACT DOCUMENTS MADE PART OF TECHNICAL SECTIONS

- A. General Conditions, General Requirements (Div. 1), and Supplementary General Requirements are made part of each technical Section whether or not attached thereto.

- B. Addenda, Amendments, Change Orders, Modifications and all other parts of the Contract Documents are made a part of each technical Section, where applicable, whether or not attached thereto.

END OF SECTION

SUMMARY OF THE WORK

PART 1 – GENERAL

RELATED DOCUMENTS

Drawings and general provisions of contract, including General and Supplementary General Conditions and Division-1 Specification sections, apply to work of this section.

1.1 SECTION INCLUDES

- A. Scope of the Work.
- B. Contractor use of site and premises.
- C. Work Sequence.

1.2 SCOPE OF THE WORK

- A. General construction consisting of the removal of the existing interior storefront doors, windows, interior office doors, walls, carpeting, millwork, concrete, walk-off mat and masonry wall. Modifications to the existing mechanical, electrical and fire protection systems.
- B. Installation of new doors/windows/frames/finish hardware, ballistic glazing, protective film on glazing, electronic locking of doors, walk-off mat, carpet tiles, metal stud walls with impact Armorcore wall board and masonry. New walls to be painted and touch paint in areas where existing has been disturbed. Installation of millwork base/upper cabinets, reception counter and gate.

1.3 CONTRACTORS USE OF SITE AND PREMISES

- A. The Contractor shall assume full responsibility of all protection and safe keeping of products under this Contract, as well as,
 - 1. Follow all security requirements of Owner.
 - 2. Securing the site at the end of each workday.
- B. Obtain and pay for use of additional storage or work areas needed for operations under this Contract.

1.4 WORK SEQUENCE

- A. The Contractor shall construct work as indicated on the drawings and coordinate construction schedule and operations of all subcontractors with the Owner and the Architect.
- B. The Owner will not occupy the site during the Work as established prior to start of project.
- C. The Contractor shall substantially complete the Work no later than **Month Day, 2018**.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

MAIN ENTRANCE SECURITY RENOVATIONS
WHITING LANE ELEMENTARY SCHOOL
47 WHITING LANE
WEST HARTFORD, CONNECTICUT

SUMMARY
OF THE WORK

Division 1
Section 01010

Page 2

END OF SECTION

CONTRACT CONSIDERATIONS

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of contract, including General and Supplementary General Conditions and Division – 1 Specification sections, apply to work of this section.

1.1 SECTION INCLUDES

- A. Construction Time.
- B. Schedule of Values.
- C. Application for Payment.
- D. Change Procedures.
- E. Request for Information.

1.2 RELATED SECTIONS

- A. Document Owner – Contractor Agreement.
- B. Section 01300 – Submittals: Schedule of Values.
- C. Section 01600 – Material and Equipment: Product substitutions.

1.3 CONSTRUCTION TIME

- A. Upon execution of Owner – Contractor Agreement and/or receipt of written notices to proceed, the Contractor shall be ready to start work at the site no earlier than **Month Day, 2018**. The Contractor shall be ready to deliver a 100 percent completed project to the Owner no later than **Month Day, 2018**.

1.4 SCHEDULE OF VALUES

- A. Submit typed schedule on AIA Form G702 – Application and Certificate for Payment Continuation Sheet.
- B. Submit Schedule of Values in duplicate within 14 days after date of Owner-Contractor Agreement.
- C. Suggested Format: Utilize the Table of Content of this Project Manual. Identify each line item with number and title of the major specification Section. Provide a separate line for Labor and Materials for each item. Identify site mobilization, bonds and insurance. This is the required minimum breakdown for the Schedule of Values; the Contractor may provide additional breakdowns.
- D. Revise schedule to list approved Change Orders, with each Application for Payment.

1.5 APPLICATION FOR PAYMENT

- A. Submit three original typed Partial Payment Estimate RD 1924-18 (Rev. 6/97).
- B. Submit up-dated construction schedule with each Application for Payment.

1.6 CHANGE PROCEDURES

- A. The Architect will advise of minor changes in the Work not involving an adjustment to Contract Sum or Contract Time as authorized by AIA A201 Article 7.4 by issuing supplemental instructions on AIA Form G710 Architect's Supplemental Instructions.
- B. The Architect may issue a Proposal Request which includes a detailed description of a proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change and the period of time during which the requested price will be considered valid. Contractor will prepare and submit an estimate within 15 days.
- C. The Contractor may propose a change by submitting request for change to the Architect using AIA Form G709 Proposal Request, describing the proposed change and its full effect on the work. Include a statement describing the reason for the change, and the effect on the Contract Sum and Contract Time with full documentation and a statement describing the effect on Work by separate or other contractors. Document any requested substitutions in accordance with Section 01600.
- D. Stipulated Change Order: Based on Proposal Request and Contractor's fixed price quotation or Contractor's request for a Change Order as approved by Architect.
- E. Construction Change Directive: Architect may issue a directive on AIA Form G704 Construction Change Directive signed by the Owner, instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in the Work, and designate method of determining any change in Contract Sum or Contract Time. Promptly execute the change.
- F. Change Order Forms: RD 1924-7 (Rev. 2/97).
- G. Execution of Change Orders: Architect will issue Change Orders of signatures of parties as provided in the Conditions of the Contract.

1.7 REQUEST FOR INFORMATION

- A. Submit all clarification requests or request for information using Architect's RFI form (enclosed). Indicate RFI number, date, who is initiating the request, date of desired response and which design team number is affected.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION

APPLICATIONS FOR PAYMENT

1.1 PAYMENT

- A. Payment will be made in accordance with Section 16.01 of the General Conditions, and Article 9 of the Supplementary Conditions of this Specification.

1.2 UNINCORPORATED MATERIALS

- A. Partial Payments for Materials in Advance of Their Incorporation in the Work Pursuant to Article 16 of the General Conditions and Article 11 of the Supplementary Conditions of this Specification.

1. In order to better ensure the availability of materials, fixtures and equipment when needed for the work, the Owner's may authorize partial payment for certain materials, but only in strict accordance with and subject to all the terms and conditions set forth in this Article, unless another method of payment is elsewhere provided in the Specifications for specified materials, fixtures or equipment.
2. The Contractor shall submit to the Owner's a written request, in quadruplicate, for payment of materials purchased or to be purchased for which Contractor desires to be paid prior to their actual incorporation in the work. The request shall be accompanied by a schedule of the types and quantities of materials, and shall state whether such materials are to be stored on or off the site.
3. Where the materials are to be stored off the site, they shall be stored at a place other than the Contractor's premises (except with the written consent of the Owner's).
4. The Contractor shall set apart and separately store at the place or places of storage all materials and shall clearly mark the materials "PROPERTY OF OWNER'S" and further, shall not at any time move any of said materials to another off-site place of storage without the prior written consent of the Owner. Materials may be removed from their place of storage off the site for incorporation in the work upon approval of the Owner.
5. Where the materials are to be stored at the site, they shall be stored at such locations as shall be designated by the Owner and only in such quantities as, in the opinion of the Owner, will not interfere with the proper performance of the work by the Contractor or by other contractors then engaged in performing work on the site. Such materials shall not be removed from their place of storage on the site except for incorporation in the work, without approval of the Owner.

B. Insurance

1. Storage Off Site: Where the materials are stored off the site and until such time as they are incorporated in the work, the Contractor shall fully insure such materials against any and all risks of destruction, damage or loss, including but not limited to fire, theft, and any other casualty or happening. The policy of insurance shall be payable to the Owner. It shall be in such terms and amounts as shall be approved by the Owner and shall be placed with a company duly licensed to do business in the State of Connecticut. The Contractor shall deliver the original and one copy of such policy and policies marked "Fully Paid" to the Owner.

2. Storage on Site: Where the materials are stored at the site, the Contractor shall furnish satisfactory evidence to the Owner that they are properly insured against loss, by endorsement or otherwise, under the policy or policies of insurance obtained by the Contractor to cover losses to materials owned or installed by the Contractor. The policy of insurance shall cover fire and extended coverage against windstorm, hail, explosion and riot attending a strike, civil commotion, aircraft, vehicles and smoke.
- C. All costs, charges and expenses arising out of the storage of such materials, shall be paid by the Contractor; and the Owner hereby reserves the right to retain out of any partial or final payment made under the Contract an amount sufficient to cover such costs, charges and expenses, with the understanding that the Owner shall have and may exercise any and all other remedies of law for the recovery of such costs, charges and expenses. There shall be no increase in the Contract price for such costs, charges and expenses and the Contractor shall not make any claim or demand for compensation therefor.
- D. The Contractor shall pay any and all cost of handling and delivery of materials, from the place of storage to the site of the work, and the Owner shall have the right to retain from any partial or final payment an amount sufficient to cover the cost of such handling and delivery.
- E. In the event that the whole or any part of these materials are lost, damaged or destroyed in advance of their satisfactory incorporation in the work, the Contractor, at the Contractor's own expense, shall replace such materials with items of the same quality. The Owner will reimburse the Contractor for the cost of the replaced materials to the extent, and only to the extent, of the money actually received by the Owner under the policies of insurance herein before referred to. Until such time as the materials are replaced, the Owner will deduct from the value of the stored materials or from any other money due under the Contract, the amount paid to the Contractor for such lost, damaged or destroyed materials.
- F. Should any of the material paid for by the Owner hereunder be subsequently rejected or incorporated in the work in a manner or by a method not in accordance with the Contract and Specifications, the Contractor shall remove and replace such defective or improperly incorporated materials with materials complying with the Contract and Specifications. Until such materials are replaced, the Owner will deduct from the value of the stored materials or from any other money due the Contractor, the amount paid by the Owner for such rejected or improperly incorporated materials.
- G. Payment for the cost of materials made hereunder shall be made in accordance with the Contract Documents, and the Contractor always retains and must comply with the Contractor's duty to deliver to the site and properly incorporate in the work only materials which comply with the Contract Documents.
- H. The Contractor shall retain any and all risks in connection with the damage, destruction or loss of the materials paid for hereunder to the time of delivery of the same to the site of the work and their proper incorporation in the work in accordance with the Contract Documents.
- I. The Contractor shall comply with all laws and the regulations of any governmental body or agency pertaining to the priority purchase, allocation and use of the materials.
- J. When requesting payment for such materials, the Contractor shall submit with the partial estimate duly authenticated DOCUMENTS OF TITLE such as bills of sale, invoices or warehouse receipts, all in quadruplicate. The executed bills of sale shall TRANSFER TITLE to the materials from the Contractor to the Owner (in the event that the invoices state that material has been purchased by a Subcontractor, bills of sale in quadruplicate will also be required transferring title to the materials from Subcontractor to the Contractor).

- K. The Contractor shall include in each succeeding partial estimate requisition a summary of materials stored, which shall set forth the quantity and value of materials in storage, on or off the site, at the end of each preceding estimate period: (1) the amount removed for incorporation in the work; and (2) the quantity and value of materials delivered during the current period and the total value of materials on hand for which payment thereof will be included in the current payment estimate.
- L. Upon proof to the satisfaction of the Owner of the actual cost of such materials and upon submission of proper proof of title as required under Paragraph J. herein, payment will be made therefor to the extent of 95%, provided however, that the cost so verified, established and approved shall not exceed the estimated cost of such materials included in the detailed bid breakdown submitted by the Contractor and approved by the Owner in accordance with schedule D; if it does, the Owner will pay only 95% of the bid breakdown.
- M. Upon the incorporation in the work of any such materials, which have been paid for in advance of such incorporation in accordance with the foregoing provisions, payment will be made for such materials incorporated in the work pursuant to Paragraph L. herein.

END OF SECTION

COORDINATION AND MEETINGS

PART 1 – GENERAL

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary General Conditions and Division-1 Specification sections, apply to work of this section.

1.1 SECTION INCLUDES

- A. Coordination.
- B. Pre-construction conference.
- C. Progress meetings.

1.2 COORDINATION

- A. Coordinate scheduling, submittals, and Work of the various Sections of Specifications to assure efficient and orderly sequence of installation of interdependent construction elements as well as meeting Owner security requirements.
- B. Verify that utility requirement characteristics of operating equipment are compatible with building utilities. Coordinate work of various Sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- C. Coordinate installation of mechanical and electrical work, which are indicated diagrammatically on Drawings. Follow routing shown and conduit, as closely as practicable; place runs parallel with line of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- D. Coordinate completion and clean up of Work of separate sections in preparation for Substantial Completion.
- E. In finished areas, conceal pipes, ducts, and wiring within the construction. Coordinate location of fixtures and outlets within finishes.
- F. Coordinate completion and cleanup of Work of separate sections in preparation for Substantial Completion.
- G. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents to minimize disruption of Owner's activities.

1.3 PRECONSTRUCTION CONFERENCE

- A. Architect will schedule a conference after Notice of Award and provide minutes of meeting.
- B. Attendance Required: Architect, Owner's representatives, Contractor, Contractor's Superintendent, and major Subcontractors.
- C. Agenda:
 - 1. Submission of list of Subcontractors, list of Products, schedule of values, and progress schedule.

2. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders and Contract closeout procedures.
3. Scheduling.
4. Use of premises by Owner and Contractor.
5. Security and housekeeping procedures.
6. Procedures for testing.
7. Procedures for maintaining record documents.
8. Establish schedule for progress meetings.

1.4 PROGRESS MEETINGS

- A. Architect will preside at meetings, record minutes, and distribute copies to Contractor and Owner's representative for distribution.
- B. Attendance Required: Job Superintendent, major Subcontractors and suppliers, Owner's representative, and Architect as appropriate to agenda topics for each meeting.
- C. Agenda:
 1. Review minutes of previous meetings.
 2. Review of Work progress.
 3. Field observations, problems, and decisions.
 4. Identification of problems, which impede planned progress.
 5. Review of submittals schedule and status of submittals.
 6. Review of off-site fabrication and delivery schedules.
 7. Maintenance of progress schedule.
 8. Corrective measures to regain projected schedules.
 9. Planned progress during succeeding work period.
 10. Coordination of projected progress.
 11. Maintenance of quality and work standards.
 12. Effect of proposed changes on progress schedule and coordination.
 13. Other business relating to Work.

PART 2 – PRODUCTS

Not Used.

MAIN ENTRANCE SECURITY RENOVATIONS
WHITING LANE ELEMENTARY SCHOOL
47 WHITING LANE
WEST HARTFORD, CONNECTICUT

COORDINATION
AND
MEETINGS

Division 1
Section 01039

Page 3

PART 3 – EXECUTION

Not Used.

END OF SECTION

CUTTING AND PATCHING

PART 1 – GENERAL

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary General Conditions and Division-1 Specification sections, apply to work of this section.

1.1 SECTION INCLUDES

- A. Requirements and limitations for cutting and patching of Work.

1.2 RELATED SECTIONS

- A. Section 01120 – Alteration Project Procedures: Cutting and patching for alterations work.
- B. Section 01300 - Submittals.
- C. Section 01600 – Materials and Equipment: Product Options and Substitutions.
- D. Individual Product Specification Sections:
 - 1. Cutting and patching incidental to work of the Section.
 - 2. Advance notification to other Sections of openings required in work of those Sections.

1.3 QUALITY OF CUTTING AND PATCHING WORK

- A. All work is to appear as if it was completed during original construction. All equipment shall be located as closely as possible to location indicated on drawings, however locations shall be adjusted in field to minimize cutting and patching of exposed materials. Conduit, piping, duct work, wiring and apparatus shall be concealed from view in all occupied spaces but may be exposed in mechanical, storage, janitorial and equipment spaces.
- B. All existing exposed materials which must be cut or removed for installation of new systems and materials shall be replaced or repaired to match existing materials as closely as practical.
- C. The Contractor shall, within 15 days of the contract signing, and prior to beginning the work, carefully examine the existing conditions and mark up one copy of the plans indicating preferred location of equipment and routing of conduit, piping, duct work and wiring to minimize cutting and patching. A meeting on site with the architect and his engineering consultants shall be arranged, to review these locations and extent of cutting and patching. Work will not proceed until these plans are approved.

1.4 SUBMITTALS

- A. Submit written request in advance of cutting or alteration which affects:
 - 1. Structural integrity of any element of Project.
 - 2. Integrity of weather exposed or moisture resistant element.
 - 3. Efficiency, maintenance, or safety of any operational element.

4. Visual qualities of sight exposed elements.
5. Work of Owner or separate contractor.
- B. Include in request:
 1. Identification of Project.
 2. Location and description of affected work.
 3. Necessity for cutting or alteration.
 4. Description of proposed work, and Products to be used.
 5. Alternatives to cutting and patching.
 6. Effect on work of Owner or separate contractor.
 7. Written permission of affected separate contractor.
 8. Date and time work will be executed.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Product Substitution: For any proposed change in materials, submit request for substitution under provisions of Section 01600.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Inspect existing conditions prior to commencing Work, including elements subject to damage or movement during cutting and patching.
- B. After uncovering existing Work, inspect conditions affecting performance of Work.
- C. Beginning of cutting or patching means acceptance of existing conditions.

3.2 PREPARATION

- A. Provide temporary supports to ensure structural integrity of the Work. Provide devices and methods to protect other portions of Project from damage.
- B. Provide protection from elements for areas, which may be exposed by uncovering work.
- C. Maintain excavations free of water.

3.3 CUTTING AND PATCHING

- A. Execute cutting, fitting, and patching including excavation and fill to complete Work.
- B. Fit Products together, to integrate with other work.

- C. Uncover work to install untimely work.
- D. Remove and replace defective or non-conforming work.
- E. Remove samples of installed work for testing when requested.
- F. Provide openings in the Work for penetration of mechanical and electrical work.

3.4 PERFORMANCE

- A. Execute work by methods to avoid damage to other Work, and which will provide appropriate surfaces to receive patching and finishing.
- B. For existing items under warrantee, employ original installer to perform cutting and patching for weather exposed and moisture resistant elements, and sight exposed surfaces.
- C. Cut rigid materials using masonry saw or core drill. Pneumatic tools are not allowed without prior approval or owner/architect.
- D. Restore work with new Products in accordance with requirements of Contract Documents.
- E. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- F. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rating safing material in accordance with Section 07210 – Building Insulation; Safing Insulation, to full thickness of the penetrated element.
- G. Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.

END OF SECTION

REGULATORY REQUIREMENTS

1.1 LAWS AND REGULATIONS

- A. All applicable Federal, State and other laws, orders, rule and regulations having jurisdiction over Construction Work in the locality of the Project, shall apply to the Contract and shall be deemed to be included in the Contract as if fully set forth herein at length.
- B. Comply with all requirements of the Connecticut State Building Code. (International Building Code-2003 with 2005 Connecticut Supplement), the Connecticut Fire Safety Code (2003 NFPA 101 with 2005 Connecticut Supplement)

1.2 PERMITS AND LICENSES

- A. The Contractor shall make the necessary arrangement for, and obtain all permits and licenses required for the Work, including paying the costs and expenses thereof.
- B. The Contractor shall be responsible for the payment of fees, which are assessed by any City, State or Federal agency having jurisdiction over the Work, unless otherwise stipulated in the Contract Documents.

1.3 COMPLIANCE

- A. The Contractor shall give all notices, pay all fees and comply with all laws, rules and regulations applicable to the Work.

1.4 ADDITIONAL COMPLIANCE

- A. The Contractor, Subcontractors, and the employees of the Contractor and Subcontractors, shall comply with all regulations governing conduct, access to the premises, operation of equipment and systems, and conduct while in or near the premises.

1.5 SAFETY

- A. The Contractor shall take every precaution against injuries to owner's personnel and the general public, in the performance of the Work. Refer to General Conditions, Art. 13.
- B. The Contractor shall comply with all applicable OSHA regulations.

END OF SECTION

REFERENCES

1.1 LIST

Following is a list of organizations, trade associations, trade institutes, and other Standards, with the acronym for each.

Where reference is made in a technical Section to a specification or a requirement of a particular Standard, the date of the Standard is that in effect at the time of the Bid Date, or that in effect at the date of the Contract Award, if there are no bids.

AA	Aluminum Association
AABC	Associated Air Balance Council
AAMA	American Architectural Manufacturer's Association
AAN	American Association of Nurserymen
AASHTO	American Association of State Highway and Transportation Officials
AATCC	American Association of Textile Chemists and Colorists
ACI	American Concrete Institute
ACIL	American Council of Independent Laboratories
ACPA	American Concrete Pipe Association
ADC	Air Diffusion Council
AF+PA	American Forest & Paper Association
AGA	American Gas Association
AHA	American Hardboard Association
AIA	American Institute of Architects
A.I.A.	American Insurance Association
AIEE	American Institute of Electrical Engineers
AIHA	American Industrial Hygiene Association
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ALI	Associated Laboratories

A.L.I.	Automotive Lift Institute
ALSC	American Lumber Standards Committee
AMCA	Air Movement and Control Association
ANSI	American National Standards Institute
AOAC	Association of Official Agriculture Chemists
APA	The Engineers Wood Association
A.P.A.	American Parquet Association
API	American Petroleum Institute
ARI	Air Conditioning and Refrigeration Institute
ARMA	Asphalt Roofing Manufacturers Association
ASA	Acoustical Society of America
ASC	Adhesive and Sealant Council
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASPE	American Society of Plumbing Engineers
ASSE	American Society of Sanitary Engineering
ASTM	American Society for Testing and Materials
AWI	Architectural Woodwork Institute
AWPA	American Wood Preservers Association
AWPB	American Wood Preservers Bureau
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturers Association
BIA	Brick Institute of America
BIFMA	Business and Institutional Furniture Manufacturer's Association
BOCA	Building Officials and Code Administrators
CABO	American Building Officials

CAUS	Color Association of the United States
CAGI	Compressed Air and Gas Institute
CBM	Certified Ballast Manufacturers Association
CDA	Copper Development Association
CGA	Compressed Gas Association
CISPI	Cast Iron Soil Pipe Institute
CRI	Carpet and Rug Institute
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standards, U.S. Department of Commerce
CTI	Ceramic Tile Institute of America
DHI	Door and Hardware Institute
DLPA	Decorative Laminate Products Association
ECSA	Exchange Carriers Standards Association
EIA	Electronic Industries Association
EIMA	Exterior Insulation Manufacturers Association
FCI	Fluid Controls Institute
FGMA	Flat Glass Marketing Association
FS	Federal Specification
FTI	Facing Tile Institute
GA	Gypsum Association
HEI	Heat Exchange Institute
HI	Hydronics Institute
HMA	Hardwood Manufacturers Association
HPVA	Hardwood Plywood and Face Veneers
ICEA	Insulated Cable Engineers Association
IEC	International Electrotechnical Commission

IEEE	Institute of Electrical and Electronic Engineers
IESNA	Illuminating Engineering Society of North America
IGCC	Insulating Glass Certification Council
ILI	Indiana Limestone Institute of America
LPI	Lightning Protection Institute
MBMA	Metal Building Manufacturers Association
MCAA	Mechanical Contractors Association of America
MIA	Marble Institute of America
ML/SFAMetal Lath/Steel Framing Association	
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry
NAAMM	National Association of Architectural Metal Manufacturers
NAPA	National Asphalt Pavement Association
NBGQANational Building Granite Quarries Association	
NBHA	National Builders Hardware Association
NBS	National Bureau of Standards
NCMA	National Concrete Masonry Association
NCRPM	National Council on Radiation Protection and Measurement
NEC	National Electric Code
NECA	National Electrical Contractors Association
NEII	National Elevator Industry, Inc.
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
N.F.P.A.	National Forest Products Association
NHLA	National Hardwood Lumber Association
NOFMANational Oak Flooring Manufacturers Association	
NPA	National Particleboard Association
NPCA	National Paint and Coatings Association

NRCA	National Roofing Contractors Association
NSF	National Sanitation Foundation
NSSEA	National School Supply and Equipment Association
NTMA	National Terrazzo and Mosaic Association
NVPMAN	National Veneer and Panel Manufacturers Association
NWMA	National Woodwork Manufacturers Association
NWWDA	National Wood Window and Door Association
OSHA	Occupational Safety and Health Administration
PCI	Prestressed Concrete Institute
PDI	Plumbing and Drainage Institute
PEI	Porcelain Enamel Institute
PS	Office of Product Standards National Bureau of Standards U.S. Department of Commerce
RFCI	Resilient Floor Covering Institute
RIS	Redwood Inspection Service
RMA	Rubber Manufacturers Association
SDI	Steel Deck Institute
S.D.I.	Steel Door Institute
SGCC	Safety Glazing Certification Council
SIGMA	Sealed Insulating Glass Manufacturers Association
SJI	Steel Joist Institute
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
SPIB	Southern Pine Inspection Bureau
SPRI	Single Ply Roofing Institute
SSPC	Steel Structures Painting Council
SWI	Steel Window Institute

TCA	Tile Council of America
TIMA	Thermal Insulation Manufacturers Association
UL	Underwriters Laboratories
USDA	U.S. Department of Agriculture
USDC	U.S. Department of Commerce
WCLIB	West Coast Lumber Inspection Bureau
WCMA	Wall Covering Manufacturers Association
WRI	Wire Reinforcement Institute
WSC	Water Systems Council
WSFI	Wood and Synthetic Flooring Institute
WWPA	Western Wood Products Association
W.W.P.A.	Woven Wire Products Association

END OF SECTION

ALTERATION PROJECT PROCEDURES

PART 1 – GENERAL

Drawings and general provisions of Contract, including General and Supplementary General Conditions and Division-1 Specification sections, apply to work of this section.

1.1 SECTION INCLUDES

- A. Products and installation for patching and extending Work.
- B. Transition and adjustments.
- C. Repair of damaged surfaces, finishes, and cleaning.

1.2 RELATED SECTIONS

- A. Section 01039 – Coordination and Meetings.

PART 2 – PRODUCTS

2.1 PRODUCTS FOR PATCHING AND EXTENDING WORK

- A. New Materials: As specified in product Sections; match existing Products exactly and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspection and testing products where necessary, referring to existing Work as a standard.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Verify that areas are ready for installation of new Work.
- B. Beginning of Work means acceptance of existing conditions.

3.2 PREPARATION

- A. Cut, move, or remove items as necessary for access to alterations and renovation work. Replace and restore at completion.
- B. Remove unsuitable material not marked for salvage, such as rotted wood, corroded metals, and deteriorated masonry and concrete. Replace materials as specified for finished Work.
- C. Remove debris and abandoned items from area and from concealed spaces.
- D. Prepare surface and remove surface finishes to provide for proper installation of new work and finishes.
- E. Close openings in exterior surfaces to protect existing work and salvage items from weather

and extremes of temperature and humidity. Insulate ductwork and piping to prevent condensation and freezing in exposed areas.

F. Repair any damages to existing construction due to contractors negligence.

3.3 INSTALLATION

A. Coordinate work of alteration and renovations to expedite completion sequentially and to accommodate Owner occupancy.

B. Project: Complete in all respects including operational mechanical and electrical work.

C. Remove, cut and patch Work in a manner to minimize damage and to provide a means of restoring Products and finishes to original or specified condition.

D. Refinish visible existing surfaces to remain in renovated rooms and spaces, to specified condition for each material, with a neat transition to adjacent finishes.

E. Install Products as specified in individual Sections.

3.4 TRANSITIONS

A. Where new Work abuts or aligns with existing, perform a smooth and even transition. Patched Work to match existing adjacent Work in texture and appearance.

B. When finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Architect.

3.5 ADJUSTMENTS

A. Where removal of partitions or walls results in combining adjacent rooms, rework floors, walls, and ceilings to a smooth plane without breaks, steps, or bulkheads.

B. Where a change of plane of ¼ inch or more occurs, request instruction from Architect.

3.6 REPAIR OF DAMAGED SURFACES

A. Patch or replace portions of existing surfaces which are damaged, lifted, discolored, or showing other imperfections.

B. Repair substrate prior to patching finish.

3.7 FINISHES

A. Finish surfaces as specified in individual Product Sections.

B. Finish patches to produce uniform finish and texture over entire area. When finish cannot be matched, refinish entire surface to nearest intersections.

3.8 CLEANING

- A. In addition to cleaning specified in Section 01500, clean Owner occupied areas of work at end of workday.

END OF SECTION

PROJECT MEETINGS

1.1 PURPOSE

Project meetings shall be held to accomplish the following:

- A. Coordinate the Work.
- C. Surface problem areas assign responsibilities to appropriate parties: i.e., Architect, Owner Project Officer, or Contractor.

1.2 INITIAL JOB MEETING (PRE-CONSTRUCTION MEETING)

- A. The Owner's Representative shall call a Pre-Construction meeting, which the Contractor shall attend. This meeting shall be called prior to the start of construction.

1.3 JOB PROGRESS MEETINGS

- A. Job progress meetings shall be scheduled by the Architect or Owner's Representative during the course of construction; the Representative shall preside. The Contractor or the Contractor's duly authorized representative and such Subcontractors, Material men and vendors as required by the Contractor or the Architect or Owner's Representative shall be present at all job progress meetings. The Contractors and Subcontractors, Material men and vendors shall answer questions on progress, workmanship, approvals required, delivery of material and other subjects concerning the Work. The purpose of such meetings is to coordinate the efforts of all concerned so that the Work proceeds without delay to completion as required by the Contract.

END OF SECTION

SUBMITTALS

PART 1 – GENERAL

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary General Conditions and Division-1 Specification sections, apply to work of this section.

1.1 SECTION INCLUDES

- A. Submittal procedures.
- B. Construction progress schedules.
- C. Shop drawings.
- D. Product data.
- E. Samples.
- F. Manufacturers' instructions.
- G. Manufacturers' certificates.

1.2 RELATED SECTIONS

- A. Section 01400 – Quality Control
- B. Section 01700 – Contract Closeout

1.3 SUBMITTAL PROCEDURES

- A. Transmit each submittal with Contractor's standard transmittal form or cover letter.
- B. Sequentially number the transmittal forms. Resubmittals to have original number with an alphabetic suffix.
- C. Identify Project, Contractor, Subcontractor, or supplier; pertinent drawing sheet and detail numbers, and specification section number, as appropriate.
- D. Apply Contractor's stamp, signed or initialed certifying that review, verification of Products required, field dimensions, adjacent construction work, and coordination of information, is in accordance with the requirements of the Work and Contract Documents.
- E. Schedule submittal to expedite the Project, and deliver to Architect at business address. Coordinate submission of related items.
- F. Identify variations from Contract Documents and Product or system limitations, which may be detrimental to successful performance of the completed Work.
- G. Provide space for Contractor and Architect and Engineer review stamps.
- H. Revise and resubmit submittals as required, identify all changes made since previous submittal.
- I. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.

1.4 CONSTRUCTION PROGRESS SCHEDULES

- A. Submit initial progress schedule in duplicate within 7 days after date of Owner-Contractor Agreement for Architect review.
- B. Revise and resubmit every two weeks.
- C. Submit revised schedules with each Application for Payment, identifying changes since previous versions.
- D. Submit a horizontal bar chart with separate line for each major section of Work or operation, identifying first workday of each week.
- E. Show complete sequence of construction by activity, identifying Work of separate stages and logically grouped activities. Indicate the early and late start, early and late finish, float dates, and duration.
- F. Indicate estimated percentage of completion for each item of Work at each submission.
- G. Indicate submittal dates required for shop drawings, product data, samples, and product delivery dates.

1.5 SHOP DRAWINGS

- A. Submit six copies.
- B. After review, distribute in accordance with Article on Procedures above and provide copies for Record Documents described in Section 01700 – Contract Closeout.

1.6 PRODUCT DATA

- A. Submit six copies.
- B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information unique to this Project.
- C. After review, distribute in accordance with Article on Procedures above and provide copies for Record Documents described in Section 01700 – Contract Closeout.

1.7 SAMPLES

- A. Submit samples to illustrate functional and aesthetic characteristics of the Product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
- B. Submit samples of finishes from the full range of manufacturers' standard colors and in custom colors selected, textures, and patterns for selection.
- C. Include identification on each sample, with full Project information.
- D. Submit the number of samples specified in individual specification sections.
- E. Reviewed samples submittal requirements in individual specification sections.

1.8 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual specification Sections, submit manufacturers' printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, in

quantities specified for Product Data.

- B. Identify conflicts between manufacturers' instructions and Contract Documents.

1.9 MANUFACTURER'S CERTIFICATES

- A. When specified submit manufacturers' certificate to Architect for review, in quantities specified for Product Data.
- B. Indicate material or Product that conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certification as appropriate.
- C. Certificates may be recent or previous test results on material or Product, but must be acceptable to Architect.
- D. Certify that products used are the current production materials.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION

SHOP DRAWINGS AND SAMPLES

1.01 CONTRACTOR SUBMITTAL

- A. The Contractor shall submit the Shop Drawings, technical data, and Samples required by the Contract. The Contractor shall adhere to all submittal and scheduling requirements for Shop Drawings and Samples. After examination of such Shop Drawings and Samples by the Architect and the return of such items by the Architect to the Contractor, the Contractor shall make corrections indicated and shall furnish to the Architect the required number of corrected copies of Shop Drawings and Samples.

1.02 SHOP DRAWINGS

- A. Shop Drawings shall be accompanied by a letter of transmittal to the Architect or the Owner's Representative requesting approval and date approval is desired.
- B. Each Shop Drawings and letter of transmittal shall be identified with the following information:
1. Project title.
 2. Contract name and Contract number.
 3. Date of the drawing, including dates of any revisions.
 4. Name of Contractor, name of Subcontractor, material supplier and manufacturer, as applicable.
 5. Name of person or firm preparing Shop Drawings.
 6. Contract Drawing numbers and Specifications, Section Division and Paragraph numbers used as references in preparing Shop Drawings, and titles of items to which the Shop Drawings refer.
- C. Shop Drawings shall show the design, dimensions, connections and other details necessary to ensure that the Shop Drawings accurately interpret the Contract Documents and shall also show adjoining Work in such Detail as required to provide proper connections with said adjoining Work. Where adjoining connected Work requires Shop Drawings, such Shop Drawings shall be submitted to the Architect or the Owner's Representative for approval at the same time so that connections can be checked.
- D. The Contractor shall verify all field measurements. Measurements available prior to submittal of Shop Drawings shall be shown and so noted on the Shop Drawings. Measurements not available prior to submission of Shop Drawings shall be noted on the Shop Drawings as not available and such measurements shall be obtained prior to fabrication.
- E. The Contractor shall submit manufacturer's drawings and specifications when necessary to fully explain apparatus and equipment required by the Work. These manufacturer's drawings and specifications shall be treated as Shop Drawings. Manufacturer's catalog numbers alone are not acceptable as sufficient information for compliance with this requirement.

1.03 PROCEDURE FOR SUBMITTAL AND APPROVAL OF ALL SHOP DRAWINGS

- A. After approval of the required Shop Drawings Schedule, the Contractor shall submit 6 prints or 5 prints and one sepia of Shop Drawings and product data to the Architect or the, or designated Representative for review and approval. A satisfactory Shop Drawing will be stamped "Approved" or "Approved As Noted," and dated; 3 prints or 2 prints and one sepia will be returned to the Contractor.
- B. Should the Shop Drawings not be approved by the Architect or the Designated Representative, it will be stamped "Not Approved" and two sets of such Shop Drawings will be returned to the Contractor with the necessary corrections and changes to be made in accordance with the notations indicated thereon.
- C. The Contractor shall make such corrections and changes and again submit 6 prints or 5 prints and one sepia of the Shop Drawings and product data for the approval of the Architect or the or the. The Contractor shall revise and resubmit the Shop Drawings as required by the Architect or the Designated Representative or the or the until approval thereof is obtained.

1.04 TRANSMITTALS, RESPONSIBILITY, SCHEDULE, PROCEDURES

- A. Copies of Transmittals - Copies of all Shop Drawing transmittal letters from the Contractor shall be sent to the Architect's.
- B. Variations - If the Shop Drawings show variations from the Contract requirements because of standard shop practice, or other reasons, the Contractor shall make specific mention of such variations in the letter of transmittal.
- C. Responsibility of Contractor
 - 1. The approval of Shop Drawings will be general and shall not relieve the Contractor of responsibility for the accuracy of such Shop Drawings, nor for the proper fitting and construction of the Work, nor of the furnishing of materials or Work required by the Contract and not indicated on the Shop Drawings. Approval of Shop Drawings shall not be construed as approving departures from the Contract Drawings, Supplementary Drawings or Specifications.
 - 2. Contractor shall be responsible for coordinating Shop Drawings of the various trades before submittal so as to avoid conflicting locations and conflicting routing of items and interference between items. Corrections resulting from such conflicts and interference shall be made by and at the expense of the Contractor.
- D. Shop Drawing Schedule - To enable the Work to be transacted in an orderly and expeditious manner, the Contractor shall within thirty (30) days after the Notice to Proceed, unless otherwise directed by the Architect or the Designated Representative, submit a proposed progress schedule showing the anticipated time of commencement and completion of the submission of Shop Drawings for each of the various operations to be performed under the Contract.

The Shop Drawing schedule shall be interfaced with the Construction Progress Schedule required by another Article in the General Requirements.
- E. Procedure for preparing, forwarding, checking and returning of all Shop Drawings shall be generally as follows:

1. The Contractor shall make available to the Contractor's Subcontractors the necessary Contract Documents and have them determine dimensions and conditions in the field, particularly with reference to coordination with other trades or work under other contracts;
 2. The Contractor shall direct the Subcontractors to prepare Shop Drawings for submission to the Architect or the Designated Representative, in accordance with the requirements of these "General Requirements".
 3. The Contractor shall also direct the Contractor's Subcontractors to flag or circle corrections made on all resubmission's for approval, so as to be readily seen, and that the symbol "Sub" be used to identify the source of correction or information that has been added.
 4. The Contractor shall:
 - a. Review and be responsible to the Architect for information shown on Subcontractor's shop and installation drawings and manufacturer's data, and also for conformity to Contract Documents.
 - b. Flag corrections made on all submissions for approval, so as to be readily seen, use the symbols "GC", "PL", "MECH" and "EL" to indicate that the correction and/or information added was made by the respective Subcontractor.
 - c. Clearly designate which trade is to perform the work when the use of "Work by Others" or other similar phrases are indicated on the Drawings before submission to the Owner's Representative.
 - d. Stamp all submissions "Recommended for Approval", date and forward required copies to the Owner's Representative.
- F. In order to expedite shop drawing procedures, the Contractor shall write a bi-weekly Shop Drawing status letter to the Architect and copies to the Field Representative, containing the following subject matter:
1. A list of all Shop Drawings which have been sent to but not returned by the Architect, giving name of the Subcontractor, Drawing number, title and date of submission.
 2. An indication of the desired priority of the return, if necessary.

Note: The status letter shall be prepared and sent at a given time, preferably Friday afternoon, to enable the Architect to receive the letter on Monday morning. This procedure shall be maintained throughout the active Shop Drawing period of construction.

1.05 SAMPLES

- A. A letter of transmittal shall accompany samples to the Owner's Representative requesting approval, and date approval is desired.
- B. Each sample shall be labeled with the following information:

1. Project title.
 2. Contract name.
 3. Date of submission.
 4. Name and quality of the material.
 5. Name of Contractor, name of Subcontractor, Material Supplier and Manufacturer, as applicable.
 6. Contract Drawing numbers and Specification Section, Division and Paragraph numbers used as reference in preparing Samples.
- C. Samples on Display - When Samples are specified to be equal to samples in the specifications or drawings, they shall be carefully compared to such samples for verification that they are equal in all respects.
- D. Samples shall be of sufficient size and quantity to show the quality, type, color, finish and texture of the material required to be furnished by the Contractor pursuant to the Contract. Furnish specific sizes and quantities where indicated in the respective technical Sections.
- E. Valuable Samples, such as hardware, plumbing and electrical fixtures, not destroyed by inspection or test, will be returned to the Contractor and may be incorporated into the Work after all questions of acceptability have been settled, providing suitable permanent records are made as to location of the Samples, their properties, and other pertinent information.

1.06 CONTRACTOR RESPONSIBILITY

- A. The Architect's approval of Shop Drawings and samples shall not relieve the Contractor of responsibility for any deviation from the requirements of the Contract. The Contractor shall be responsible for the accuracy of the Shop Drawings and Samples and for the conformity of Shop Drawings and Samples with the Contract unless the Contractor has notified the Architect of the deviation in writing at the time of submission and has received from the Architect written approval of the specified deviations. The Architect's approval shall not relieve the Contractor of responsibility for errors or omissions in the Shop Drawings and Samples.

1.07 COMMENCEMENT OF WORK

- A. No portion of the Work shall be commenced until required Shop Drawings and Samples are approved by the Architect.

END OF SECTION

QUALITY CONTROL

PART 1 – GENERAL

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary General Conditions and Division-1 Specification sections, apply to work of this section.

1.1 SECTION INCLUDES

- A. Quality assurance and control of installation.
- B. References.
- C. Inspection and testing laboratory services.

1.2 RELATED SECTIONS

- A. Section 01300 - Submittals
- B. Section 01600 – Material and Equipment

1.3 QUALITY ASSURANCE/CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, Products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply fully with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding. Architect's decision is final.
- D. Comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform work by persons qualified to produce workmanship or specified quality. As per manufacturer's direction and as per individual specification section.
- F. Secure Products in place with positive anchorage devices designated and sized to withstand stresses, vibration, physical distortion or disfigurement.

1.4 REFERENCES

- A. Conform to reference standards that are most current to the date of the bids.
- B. Should specified reference standards conflict with Contract Documents, request clarification from Architect before proceeding. Architect's decision is final.
- C. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any reference documents.

1.5 INSPECTION AND TESTING LABORATORY SERVICES

- A. In addition to testing specified in individual sections to be Contractor's responsibility, the Owner may employ and pay for services of an independent firm to perform inspection and testing.
- B. Contractor is to cooperate and coordinate with independent testing firm:
 - 1. Furnish samples of materials, design mix, equipment, tools, storage and assistance as requested.
 - 2. Notify Owner and independent testing firm 24 hours prior to expected time for operations requiring services.
 - 3. Make arrangements with independent firm and pay for additional samples and test required for Contractor's own use.
- C. Retesting required because of nonconformance to specified requirements shall be performed by the same independent firm on instructions by the Owner. Payment for retesting will be charged to the Contractor by deducting inspection or testing charges from the Contract Sum.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION

CONSTRUCTION FACILITIES & TEMPORARY CONTROLS

PART 1 – GENERAL

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary General Conditions and Division-1 Specification sections, apply to work of this section.

1.1 SECTION INCLUDES

- A. Temporary Utilities: Electricity, lighting, heat, ventilation, telephone service, water, and sanitary facilities.
- B. Temporary Controls: Barriers, enclosures and fencing, protection of the Work, water control and security.
- C. Progress Cleaning.
- D. Construction Facilities: Field Office.

1.2 RELATED SECTIONS

- A. Section 01700 – Contract Closeout: Final cleaning.

1.3 TEMPORARY ELECTRICITY

- A. Connect to power service as agreed upon by Owner.
- B. Owner will pay cost of energy used. Exercise measures to conserve energy.
- C. Provide power outlets for construction operations, with branch wiring and distribution boxes. Provide flexible power cords as required.
- D. Permanent convenience receptacles may be utilized during construction.

1.4 TEMPORARY LIGHTING

- A. Provide and maintain lighting for construction operations.
- B. Provide and maintain lighting to exterior staging and storage areas after dark for security purposes.
- C. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required.
- D. Maintain lighting and provide routine repairs.

1.5 TEMPORARY VENTILATION

- A. Contractor shall ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

1.6 TEMPORARY WATER SERVICE

- A. Contractor will connect to existing water source for construction operations.
- B. Owner will pay cost of water used. Exercise measures to conserve water.
- C. Extend branch piping with outlets located so water is available by hoses with threaded connections.

1.7 TEMPORARY SANITARY FACILITIES

- A. Contractor shall provide and maintain temporary sanitary facilities and enclosures. Contractor may not use facilities in the building.
- B. Contractor is responsible for maintaining the facilities during the entire period and return to the Owner at the end of the construction period at or exceed the original conditions.

1.8 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Protect non-contractor vehicular traffic, stored materials, site and structures from damage.

1.9 EXTERIOR ENCLOSURES

- A. Provide temporary insulated weather-tight closure of exterior openings to accommodate acceptable working conditions and protections for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification Sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

1.10 FENCING

- A. Construction: Provide 6 foot high chain link or plastic fencing around construction site: equip with vehicular and pedestrian access gates with locks.

1.11 WATER CONTROL

- A. Grade site to drain. Maintain excavation free of water. Provide, operate and maintain pumping equipment.
- B. Protect site from puddling or running water. Provide erosion control measures as required to protect site from soil erosion.

1.12 PROTECTION OF INSTALLED WORK

- A. Protect installed Work and provide special protection where specified in individual specification Sections.

1.13 SECURITY

- A. It shall be the Contractor's responsibility to secure the site and building until substantial completion.

1.14 PARKING

- A. Restrict parking of construction vehicles to the site as necessary.

1.15 PROJECT IDENTIFICATION

- A. Provide a project sign of exterior grade plywood and wood frame construction, painted, with exhibit lettering by professional sign painter.

1.16 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Remove waste materials, debris, and rubbish from site weekly and dispose off-site.

1.17 FIELD OFFICE

- A. Contractor will provide a field office. Weather-tight with lighting, electrical outlets, heating, cooling and ventilating equipment, and equipped with sturdy furniture and have space to accommodate (8) persons for project meetings.
- B. Contractor shall be responsible for providing any furnishing and equipment necessary for the display and reference use of the construction documents, shop drawings and other materials during the entire construction period.
- C. Contractor shall equip with a telephone and fax machine and use such office as the office of the construction superintendent.

1.18 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary above grade or buried utilities, equipment, facilities, materials, prior to Substantial Completion.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing facilities used during construction as near as practical to original condition. Restore permanent facilities used during construction to specified condition.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION

MATERIAL AND EQUIPMENT

PART 1 – GENERAL

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary General Conditions and Division-1 Specification sections, apply to work of this section.

1.1 SECTION INCLUDES

- A. Products.
- B. Transportation and handling.
- C. Storage and protection.
- D. Product options.
- E. Substitutions.

1.2 RELATED SECTIONS

- A. Section 01400 – Quality Control.

1.3 PRODUCTS

- A. Products: Means latest production material, machinery, components, equipment, fixtures, and systems forming the Work. Does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components required for reuse.
- B. Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.
- C. Provide interchangeable components of the same manufacturer, for similar components.

1.4 TRANSPORTATION AND HANDLING

- A. Transport and handle Products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to assure that Products comply with requirements, quantities are correct, and Products are undamaged.
- C. Provide equipment and personnel to handle Products by methods to prevent soiling, disfigurement, or damage.

1.5 STORAGE AND PROTECTION

- A. Store and protect Products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive Products in weather-tight, climate controlled enclosures.
- B. For exterior storage of fabricated Products, place on sloped supports, above ground.
- C. Provide off-site storage and protection when site does not permit on-site storage or protection.

- D. Cover Products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation.
- E. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- F. Provide equipment and personnel to store Products by methods to prevent soiling, disfigurement, or damage.
- G. Arrange storage of Products to permit access for inspection. Periodically inspect to assure Products are undamaged and are maintained under specified conditions.

1.6 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Any Product meeting those standards or description.
- B. Product Specified by Naming One or More Manufacturers: Products of manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.
- D. Products specified by naming one manufacturer without a provision for substitution: no substitution allowed.

1.7 SUBSTITUTIONS

- A. AIA document A701 – Instructions to Bidders specify time restrictions for submitting requests for Substitutions during the bidding period. In any case, substitutions during bidding are only acceptable if such substitutions are issued as addendum items.
- B. Substitutions may be considered when a Product becomes unavailable through no fault of the Contractor.
- C. Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents.
- D. A request constitutes a representation that the Contractor:
 - 1. Has investigated proposed Product and determined that it meets or exceeds the quality level of the specified Product.
 - 2. Will provide the same warranty for the Substitution as for the specified Product.
 - 3. Will coordinate installation and make changes to other Work, which may be required for the Work to be complete with no additional cost to the Owner.
 - 4. Waives claims for additional costs or time extension, which may subsequently become apparent.
 - 5. Will reimburse Owner for review or redesign services associated with reapproval by authorities.

- E. Substitutions will not be considered when they are indicated or implied on shop drawings or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.
- F. Substitution Submittal Procedure:
1. Submit four copies of request for Substitution for consideration. Limit each request to one proposed Substitution.
 2. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence.
 3. The Architect will notify the Contractor, in writing, of decisions to accept or reject request.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION

PRODUCT OPTIONS AND SUBSTITUTIONS

1.1 TIME ALLOWED

- A. To be considered for approval, the requests by the Contractor to use optional products and to make substitutions shall be made to the Architect within the number of days after Notice to Proceed, as indicated in the following Schedule:

<u>Number of Calendar Days for Completion of Project</u>	<u>Number of Calendar Days After Notice to Proceed</u>
180 and Fewer	Thirty (30)

Requests will not be considered if made for a certain item or items if made at such date, which will not allow time for proper Architect analysis and determination for decision before need for incorporation of item or items in the Work of the Project.

Consideration for approval will be as stipulated in Article 4, Section 4.03 of the General Conditions.

1.2 INFORMATION FOR SUBMITTAL

- A. Submit product literature, samples, drawings, life cycle cost data, maintenance data, and other pertinent documentation that the Architect may reasonably require to make a proper analysis and determination.

1.3 APPROVAL DECISION

- A. The decision for approval or rejection of a product option or substitution shall rest solely with the Architect.

1.4 ACCOMMODATIONS FOR SUBSTITUTIONS

- A. In the event substitute products and systems, which are, accepted cause accommodations incurring additional costs, such costs shall be borne by the Contractor.

END OF SECTION

CONTRACT CLOSEOUT

PART 1 – GENERAL

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary General Conditions and Division-1 Specification sections, apply to work of this section.

1.1 SECTION INCLUDES

- A. Closeout Procedures.
- B. Final Cleaning.
- C. Adjusting.
- D. Project Record Documents.
- E. Operation and Maintenance Data.
- F. Warranties.
- G. Spare Parts and Maintenance Materials.

1.2 RELATED SECTIONS

- A. Section 01500 – Construction Facilities and Temporary Controls: Progress cleaning.

1.3 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Owner's inspection.
- B. Schedule final inspection with Owner's representative and Architect.
- C. If during final inspection, Owner's representative or the Architect found more than five items not completed, the inspection will be terminated and the contractor will complete all work and reschedule final inspection.
- D. On the second inspection, if more than five items are again found to be not completed, the Owner may consider action to terminate the contract and deduct the cost for completion by third party.
- E. Provide submittals to Owner that are required by governing or other authorities.
- F. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.

1.4 FINAL CLEANING

- A. Execute final cleaning prior to final inspection.
- B. Clean equipment and fixtures to a sanitary condition.

- C. Clean site; sweep paved areas, rake clean landscaped surfaces.
- D. Remove waste and surplus materials, rubbish, and construction facilities from the site.

1.5 ADJUSTING

- A. Adjust operating Products and equipment to ensure smooth and unhindered operation and compliance with warrantee.

1.6 PROJECT RECORD DOCUMENTS

- A. Maintain on site, two sets of the following record documents; record actual revisions to the Work:
 - 1. Contract Drawings
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other Modifications to the Contract.
 - 5. Reviewed shop drawings, product data, and samples.
- B. Store one set of Record Documents separate from documents used for construction.
- C. Record information concurrent with construction progress on an up-to-date set of red-marked, annotated as-built drawings, to be furnished to the Owner upon completion of construction.
- D. Specifications: Legibly mark and record at each Product section description of actual Products installed, including the following:
 - 1. Manufacturer's name and product model and number.
 - 2. Product substitutions or alternates utilized.
 - 3. Changes made by Addenda and Modifications.
- E. Record Documents and Shop Drawings: Legibly mark each item to record actual construction including:
 - 1. Measured locations of internal utilities and appurtenances concealed in construction, reference to visible and accessible features of the Work.
 - 2. Field changes of dimension and detail.
 - 3. Details not on original Contract Drawings.
- F. Delete Architect title block and seal from all documents.
- G. Submit documents to Owner with claim for final payment.

1.7 OPERATION AND MAINTENANCE DATA

- A. Submit three sets prior to final inspection, bound in 8-1/2 x 11 inch text pages, three side ring capacity expansion binders with durable plastic covers.
- B. Prepare red binder covers with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project.

- C. Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
- D. Contents: Prepare a Table of Contents for each volume, with each Product or system description identified, type on 24 pound white paper.
- E. Part 1: Directory, listing names, addresses, and telephone number of Architect, Consultants, Contractor, Subcontractors, and major equipment suppliers.
- F. Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone number of Subcontractors and suppliers. Identify the following:
 - 1. Significant design criteria.
 - 2. List of equipment.
 - 3. Parts list for each component.
 - 4. Operating instructions.
 - 5. Maintenance instructions for equipment and systems.
 - 6. Maintenance instructions for (special) finishes, including recommended cleaning methods and materials and special precautions identifying detrimental agents.
- G. Part 3: Project documents and certificates, including the following:
 - 1. Shop drawings and product data.
 - 2. Certificates.

1.8 WARRANTIES

- A. Provide duplicate notarized copies.
- B. Execute and assemble documents from Subcontractors, suppliers, and manufacturers.
- C. Submit three sets of Warranties with Table of Contents, prior to final inspection, bound in 8 ½ x 11 inch text pages, three side ring capacity expansion binders with durable plastic covers.
- D. For items of Work delayed beyond date of Substantial Completion, provide updated submittal within ten days after acceptance as start of warranty period.

1.9 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual specification Sections.
- B. Deliver to Project site and place in location as directed; obtain receipt prior to final payment.

PART 2 – PRODUCTS

Not Used.

MAIN ENTRANCE SECURITY RENOVATIONS
WHITING LANE ELEMENTARY SCHOOL
47 WHITING LANE
WEST HARTFORD, CONNECTICUT

CONTRACT CLOSEOUT

Division 1
Section 01700

Page 4

PART 3 – EXECUTION

Not Used.

END OF SECTION

PROJECT RECORD DOCUMENTS

1.1 PROJECT RECORD DRAWINGS

- A. The purpose of the Project Record Drawings is to record the actual location of the Work in place, including, but not limited to, underground lines, concealed piping within buildings, concealed valves and control equipment, connections, switches, and cut-outs, and to record changes in the Work.
- B. In addition to the sets of Contract Drawings that are required by the Contractor on the Site to perform the Work, the Contractor shall maintain, at the Site, one (1) copy of all Drawings, Specifications and Addenda that are part of the Contract as awarded. Each of these documents shall be clearly marked "Project Record Drawing" as indicated below, maintained in a clean and neat condition available at all times for inspection by the Architect and shall not be used for any other purpose during the progress of the Work.

1. Each record drawing shall bear the legend "PROJECT RECORD DRAWING" in heavy block lettering, 1/2" high and contain the following data:

PROJECT RECORD DRAWING

- a. Contractor's Name _____
Contractor's Address _____
Made by _____ Date _____
- b. Checked by _____ Date _____
2. Where possible, changes from the Contract Drawings shall be conspicuously encircled.
- C. Project Record Requirements
1. The Contractor shall mark-up the "Project Record Drawing" to show:
- a. Approved changes in the Work.
 - b. Location of underground Work and concealed Work.
 - c. Details not shown in the original Contract Documents.
 - d. All relocations of Work.
 - e. All changes in dimensions.
 - f. All access doors.
 - g. Location of all plumbing, heating, ventilating, air conditioning and electrical assemblies.
2. Such information shall include, but shall not be limited to:
- a. Footing depth in relation to finished grade elevations.
 - b. All changes in floor elevations.
 - c. All structural changes.
 - d. All substitutions.
 - e. Elevations and locations of all underground utilities, services, or structures referenced to permanent above-ground structures or monuments.
 - f. Designation of all utilities as to the size and use of such utilities.

- g. All invert elevations of manholes.
 - h. The location of all utilities, services and appurtenances concealed in building structures that have been installed different from that required by the Contract.
 - i. All approved change orders.
- D. The Contractor shall keep the Project Record Documents up-to-date from day to day as the Work progresses. Appropriate documents are to be updated promptly and accurately; no Work is to be permanently concealed until all required information has been recorded.
- E. Each month these record drawings will be examined by the Architect's Field Representative prior to recommending the approval of the partial payment request to ascertain that the record prints reflect the changes to date.
- F. Record Shop Drawings: If installed equipment is at variance with the respective approved Shop Drawing, the Contractor shall furnish to the Architect's Field Representative revised Shop Drawings indicating the actual completed installation.
- G. As-Built Drawings:
 - 1. At the conclusion of the job, the Contractor shall have transfer all the changes appearing on the Record Prints to two (2) sets of Mylar reproductions of the original contract tracings. The title block for the Mylar reproductions shall include the name of the Contractor or the name of the Consultant who prepared the reproductions.
 - 2. Two (2) sets of prints of Mylar "as-built" tracings will be provided to the Architect's Field Representative for approval as many times as is required until the prints are approved as reflecting the "as-built" installation.
- H. Shop Drawings for Permanent Records - In addition to the drawings required as above mentioned, the Contractor shall submit a list of all approved Shop Drawings of the Work as installed. From this list the Architect's Field Representative will select the drawings desired for permanent records. The Contractor shall furnish these in a bound set to the Architect's Field Representative.
- I. All of the above listed requirements of this Article shall be at the Contractor's expense.
- J. The Project Record Drawings are to be submitted by the Contractor to the Architect when all the Work is completed and shall be approved by the Architect before the Contractor may request final payment.
- K. Final payment shall be contingent on completion of the above listed requirements in this Section.

END OF SECTION

HVAC OPERATION, TRAINING MANUAL

1.02 OPERATION AND MAINTENANCE MANUAL

- A. Prior to the final checkout, adjustment and startup of the system, the Contractor shall furnish the Owner's Representative with a draft of the Operation and Maintenance manual for review and comment.

The Contractor shall furnish the Architect with five (5) copies of the final Operating and Maintenance Manual, which shall be typewritten (double-spaced) on heavy bond paper securely bound in a loose-leaf type book. The manual shall contain at a minimum, but not necessarily be limited to, the following items for each item of machinery and heating, ventilating and air conditioning system (or any other system) installed under this Contract:

1. Complete starting and stopping instructions.
2. Troubleshooting instructions.
3. Routine, periodic and special maintenance instructions.
4. Manufacturers manuals for various components of the system.
5. Actual locations of all starters, contractors, valve charts, and other pertinent items.
6. Complete parts list and telephone numbers and address of the manufacturer and local distributor.

END OF SECTION

GUARANTEES, WARRANTIES, BONDS AND MAINTENANCE CONTRACTS

1.1 CONTRACTOR'S GUARANTEE

- A. Guarantee shall be as stipulated in Article 18 of the General Conditions.
- B. Manufacturers' warranties and guarantees shall be as stipulated in Article 6, Section 6.07 of the General Conditions.
- C. The Contractor shall furnish a written guarantee in the following form:

"GUARANTEE"

PROJECT _____

CONTRACT NO. _____

The Contractor hereby guarantees that the Work specified for the aforesaid Contract will be free from defects of material and workmanship for a period as specified in the General Conditions.

The Contractor also guarantees that the Contractor will repair or replace, whichever may be deemed necessary by the Architect, all defective material or workmanship of the Work, that may appear within the guarantee period, to the satisfaction of the Architect and without any cost or expense to the Architect.

Contractor

By _____

Date _____

Sworn to me before this

_____ day of _____, 20__

Notary Public

- D. Scheduling of corrective Work will be determined by the Architect. Work required to correct defective material or workmanship during the guarantee periods shall be done by the Contractor without cost to the Owner.
- E. Should the Contractor fail to remedy defects immediately, the Owner may Furnish such materials and labor as are necessary to bring the Work to the standard called for and the Contractor shall reimburse the Owner in full immediately.

1.2 WARRANTIES AND GUARANTEES (OTHER THAN CONTRACTOR'S)

- A. Warranties and guarantees as specified in the respective Sections for products and systems shall be in addition to the Contractor's guarantee, and shall be for such periods and with such conditions as stipulated.

1.3 BONDS

- A. The Contractor shall provide bonds as stipulated in Article 14 of the General Conditions.

END OF SECTION

GENERAL STANDARDS

PART 1 – GENERAL

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary General Conditions and Division-1 Specification sections, apply to work of this section.

1.1 SECTION INCLUDES

- A. General Standards.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Material and Equipment: Section 01600.
- B. The Specification Section for that Work.

1.3 GENERAL STANDARDS APPLICABLE TO ALL SPECIFICATION SECTIONS

- A. These provisions, standards, and tolerances shall apply to all work under this contract. Where stricter standards and tolerances are specified, they shall take precedence over these standards and tolerances.
 - 1. Some of the requirements specified in this Section are performance requirements. The Architect will cooperate in deciding how best to make the work conform to these performance requirements, and he will issue prompt interpretations and explanations of these requirements when requested to do so.
- B. Build and install parts of the work level, square, plumb, and in correct position unless specifically shown or specified elsewhere.
 - 1. No part shall be out of plumb, level, square, or correct position so much as to impair its function or that of the project.
 - 2. No part shall be out of plumb, level, square, or correct position so much as to impair the aesthetic effect of the part of the project as judged by the Architect.
 - 3. The following tolerances shall apply to plane surfaces unless stricter tolerances are specified. These tolerances shall not apply to work for which, in the Architect's interpretation, they are clearly inappropriate.
 - a) No point in the plane surface shall be out of correct position by more than 1/8".
 - b) No tangent to the plane surface shall vary from the vertical, horizontal, or other indicated plane by more than 1/2" in 12'.
- C. Make joints tight and neat. If such is impossible, apply moldings, sealant, or other closure as directed by Architect.
- D. Under potentially damp conditions, provide galvanic insulation between different metals which are not adjacent on the galvanic scale.
- E. All fasteners used by all trades on the exterior of the building and where dampness and

- corrosion can reasonably be anticipated shall be corrosion resistant.
1. Fasteners used for exterior wood trim, whether set and puttied or not, shall be stainless steel or aluminum.
 2. Fasteners for other carpentry on the exterior or in potentially damp locations shall be stainless steel, aluminum, or hot dip galvanized steel.
 3. Fasteners for copper and brass in all locations and under all conditions shall be copper or brass.
 4. Fasteners for stainless steel shall be stainless steel.
 5. Fasteners for aluminum shall be stainless steel or aluminum.
 6. Fasteners for ferrous metals shall be galvanized or stainless steel.
 7. Fasteners for other materials on the exterior of the building and where dampness and corrosion can reasonably be anticipated shall be one of the types specified above.
 8. If corrosion resistant fasteners are not available, notify Architect. Architect will direct alternative protection.
- F. Apply protective finish to parts of the work before concealing parts. For example, paint door tops and bottom before hanging doors, and paint corrosible mounting plates before installing parts over them.
1. Paint other concealed materials with same primer and finish specified for exposed surfaces. If concealed materials are fully covered, primer alone is sufficient.
 2. Concealed parts, which are already corrosion protected, need not be painted unless specified otherwise.
- G. Manufacturers, subcontractors, and workmen shall be experienced and skillful in performing the work assigned to them.
- H. Verify critical dimensions in the field before fabricating items, which must fit adjoining construction.
- I. Where accessories are required in order to install parts of the work in usable form, provide such accessories.
- J. Follow manufacturer's instructions for assembling, installing and adjusting products. Where manufacturer's instructions conflict with Contract Documents, request instructions from Architect.
- K. Adjust and operate all items of equipment, leaving them fully ready for use.
- L. All guarantees, warranties, and service maintenance agreements shall commence on the date of substantial completion of the work or the item being guaranteed, whichever is later, so that Owner receives full use of the item for the guarantee period.
- M. All materials and equipment shall comply with the Occupational Safety and Health Act as amended.

1.4 GENERAL WORK TO BE PERFORMED AS PART OF GENERAL CONDITION

- A. Seal cracks and openings so as to make exterior skin of building tight to the weather. If methods of doing so are not specified, notify Architect, and proceed as directed by the Architect.
- B. Provide adequate blocking, bracing, nailers, and fastenings to install parts of the work securely. Installed parts shall be able to withstand 2-1/2 times the maximum anticipated load as estimated by Architect. Blocking, bracing, nailers, and fastenings shall not be subject to deterioration or weakening as the result of normal environmental conditions or aging.
- C. Perform cutting and patching required for all trades. Use workmen skilled in such work. Patch holes where ducts, conduit, pipes, and other items pass through existing construction. Patch holes where ducts, conduit, pipes, and other items are removed from existing construction.
- D. Check drawings for requirements for bases, pads, and other supporting structures. Provide such supporting structures.
- E. As part of the one year warranty specified in the General Conditions, repair cracks and other faults which occur as a result of settlement and shrinkage during the first year after substantial completion. This does not include faults, which are due to abuse of the project, or abnormal faults which result from inadequate design.

1.5 REFERENCE STANDARDS

- A. Unless date is listed, reference to standard specifications shall mean latest edition of such specifications published at date of bid documents.
- B. Reference to technical society or organization is made in the Project Manual according to the abbreviations listed in Section 01090.

END OF SECTION

SUPPORT SYSTEM FOR SUSPENDED CEILINGS

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

- A. Provide structural ceiling suspension system as indicated on the Drawings and as specified herein, for all suspended ceiling systems except as specified in Par. E, below.
- B. This suspension system shall include the attachment wood joists and/or steel beam.
- C. Provide supports for furred areas, and for opening frames, lighting fixtures frames, furred ceilings, hoods and other items as indicated on the Drawings.
- D. Furring members and other attachments for the various ceiling materials and systems shall be as specified in the respective Section.

1.02 RELATED SECTIONS

- A. Acoustical Ceilings Section 09510

1.03 REFERENCES

- A. American Society for Testing and Materials (ASTM)
 - 1. A36 - Specification for Structural Steel
 - 2. A307 - Specification for low Carbon Steel Externally Threaded Standard Fasteners.
 - 3. A446 - Standard Specifications for Steel sheet, Zinc-Coated by the Hot-Dip Process, Structural Quality.
 - 4. A525 - Standard Spec. for General Requirements for Steel Sheet, Zinc-Coated by the Hot-dip Process.
 - 5. A568 - Standard Spec. for Steel, Sheet, Carbon, and High Strength, Low-alloy, Hot-rolled and Cold-rolled, General Requirements for.

1.04 SUBMITTALS

- A. Submit Shop Drawings showing suspension assembly, indicating all components, connections and anchorages, and grid layout.
- B. Submit three (3) samples of each component of the assembly.
- C. Submit samples of anchor and descriptive literature indicating its characteristics; submit laboratory

report certifying pullout and shear capabilities for the anchor embedded in the materials to be used in this Project.

- D. If GAT system used, submit 3 samples of each component of assembly.

1.05 **REGULATORY REQUIREMENTS**

- A. Connecticut State Building Code.

PART 2 - PRODUCTS

2.01 **MATERIALS**

- A. Steel Angle and Plate

ASTM A-36. Provide angle 3"x3"x3/16"x1" wide, with 1³/₈" long slot for 3/8" bolt. Provide plate 1" wide x 3/16 thick with 1³/₈" long slot for 3/8" bolt. Provide shop coat of asphaltum paint.

- B. Bolts

ASTM A307, 3/8" diameter, with lock washers and nuts. Provide shop coat of asphaltum paint.

- C. Running Channels

1¹/₂" deep x 7/16" wide flanges, 475 lbs. per 1000' painted, 508 lbs. per 1000', galvanized. $S(\text{in.}^3) = .0538$, $I(\text{in.}^4) = .0404$. Provide shop coat of asphaltum paint for paint channels. Use painted channels unless indicated otherwise.

ASTM A568 for painted channels.

ASTM A446 for galvanized channels: ASTM A525 - G-60 galvanized coating.

- D. Sleeve Anchors (Angle to Deck) -

1. Manufacturers

- a. Hilti Fastening Systems.
- b. Illinois Tool Works, Inc.

2. Stainless Steel

3. Bolts: Minimum diameter of 3/8", with hex head.

4. Safe working loads: for pullout: 400 lbs. (min.); for shear: 400 lbs. (min.) in 3,000 p.s.i. lightweight concrete.

- E. Option

Anchors (Steel Deck Inserts - Angle to Deck) -Installed before concrete is poured:

1. Manufacturers: Illinois Tool Works Inc.

2. Material: stainless steel.

3. Bolts: minimum diameter of 3/8", with hex head.

4. Safe working loads: for pullout: 400 lbs. (min.); for shear: 400 lbs. (min.); in 3,000 p.s.i. lightweight concrete. Note: These values are for anchors installed through the deck rib.

2.02 PAINTING

- A. All steel members and accessories of the support system unless galvanized or of stainless steel, shall be dipped or painted with one coat approved asphaltum paint.

PART 3 - EXECUTION

3.01 COORDINATION WITH OTHER TRADES

- A. Coordinate this Work with the various trades who may have ducts, pipes, conduits, or other Work in the spaces above the suspended ceilings, in order that anchors, hangers and running channels may be properly placed to avoid such ducts, pipes, conduits, and other obstructions. Any changes required to be made in the locations of anchors, hangers, and running channels by reason of the Contractor's failure to observe this requirement shall be made by the Contractor without additional cost to the Owner.
- B. Coordinate Work with Ceiling Systems Work.

3.02 SUPPORT SYSTEM LOCATIONS

- A. Provide support system: for all suspended ceiling systems as indicated on the Drawings; for duct enclosures; for other enclosures or furring systems indicated on the Drawings and specified herein.

3.03 INSTALLATION

- A. Secure 3" x 3" steel angle to structural concrete deck with sleeve anchors or steel deck inserts; install anchors as recommended by the manufacturer. Space at 48" o.c. maximum in each direction to accommodate the running channel layout.
NOTE: If steel deck inserts are used, install through deck ribs.
- B. Attach steel plate hangers to angle with 3/8" diameter bolt, lock washer, and nut.
- C. Attach running channels to plate hangers with 3/8" diameter bolt, lock washer and nut.

Install channels level, true to grid layout, at proper height, ready to receive the ceiling system: furring channels for lath and plaster or gypsum board; or for drop clips for acoustical ceiling tees.

3.04 CEILING OPENINGS

- A. Provision shall be made for the installation of lighting fixtures, ventilating or air conditioning equipment, access openings, and other ceiling openings.
- B. Rigid frames of furring channels or angles shall be provided around openings, adequately braced and reinforced.

END OF SECTION

ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Wood blocking and nailers.
 - 2. Sheathing.

1.3 DEFINITIONS

- A. Rough Carpentry: Carpentry work not specified in other Sections and not exposed, unless otherwise indicated.
- B. Lumber grading agencies, and the abbreviations used to reference them, include the following:
 - 1. NELMA - Northeastern Lumber Manufacturers Association.
 - 2. NLGA - National Lumber Grades Authority.
 - 3. RIS - Redwood Inspection Service.
 - 4. SPIB - Southern Pine Inspection Bureau.
 - 5. WCLIB - West Coast Lumber Inspection Bureau.
 - 6. WWPA - Western Wood Products Association.

1.4 SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
 - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used, net amount of preservative retained, and chemical treatment manufacturer's written instructions for handling, storing, installing, and finishing treated material.
 - 2. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
 - 3. Include copies of warranties from chemical treatment manufacturers for each type of treatment.
- B. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the American Lumber Standards Committee Board of Review.

1.5 QUALITY ASSURANCE

- A. Testing Agency Qualifications: An independent testing agency, acceptable to authorities having jurisdiction, with the experience and capability to conduct the testing indicated, as documented according to ASTM E 548.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber, plywood, and other panels; place spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Laminated-Veneer Lumber:
 - a. Boise Cascade Corporation.
 - b. Georgia-Pacific Corporation.
 - c. Louisiana-Pacific Corporation.
 - d. Pacific Woodtech Corp.
 - e. Trus Joist MacMillan.
 - f. Union Camp Corp.; Building Products Division.
 - g. Willamette Industries, Inc.

2.2 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standards Committee Board of Review.
1. Factory mark each piece of lumber with grade stamp of grading agency.
 2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
 3. Provide dressed lumber, S4S, unless otherwise indicated.
 4. Provide dry lumber with 19 percent maximum moisture content at time of dressing for 2-inch nominal (38-mm actual) thickness or less, unless otherwise indicated.

2.3 MISCELLANEOUS LUMBER

- A. General: Provide lumber for support or attachment of other construction, including the following:
1. Blocking.
 2. Nailers.

- B. For items of dimension lumber size, provide Construction, Stud, or No. 2 grade lumber with 19 percent maximum moisture content and any of the following species:
1. Mixed southern pine; SPIB.
 2. Hem-fir or Hem-fir (north); NLGA, WCLIB, or WWPA.
 3. Spruce-pine-fir (south) or Spruce-pine-fir; NELMA, NLGA, WCLIB, or WWPA.
 4. Eastern softwoods; NELMA.
 5. Northern species; NLGA.
 6. Western woods; WCLIB or WWPA.
- C. For concealed boards, provide lumber with 19 percent maximum moisture content and any of the following species and grades:
1. Mixed southern pine, No. 2 grade; SPIB.
 2. Hem-fir or Hem-fir (north), Construction or 2 Common grade; NLGA, WCLIB, or WWPA.
 3. Spruce-pine-fir (south) or Spruce-pine-fir, Standard or 3 Common grade; NELMA, NLGA, WCLIB, or WWPA.
 4. Eastern softwoods, Common grade; NELMA.
 5. Northern species, Common grade; NLGA.
 6. Western woods, Construction or No. 2 Common grade; WCLIB or WWPA.

2.4 SHEATHING

- A. Plywood Roof Sheathing: Exterior sheathing.
1. Span Rating: Not less than[16/0] [20/0] [24/0] [32/16] [40/20] [48/24].
 2. Thickness: As indicated.

2.5 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.
- B. Nails, Brads, and Staples: ASTM F 1667.
- C. Power-Driven Fasteners: CABO NER-272.
- D. Wood Screws: ASME B18.6.1.
- E. Screws for Fastening to Cold-Formed Metal Framing: ASTM C 954, except with wafer heads and reamer wings, length as recommended by screw manufacturer for material being fastened.
- F. Lag Bolts: ASME B18.2.1. (ASME B18.2.3.8M).
- G. Bolts: Steel bolts complying with ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat washers.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.
- B. Do not use materials with defects that impair quality of rough carpentry or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- C. Apply field treatment complying with AWPA M4 to cut surfaces of preservative-treated lumber and plywood.
- D. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
 - 1. CABO NER-272 for power-driven fasteners.
 - 2. Published requirements of metal framing anchor manufacturer.
 - 3. Table 23-II-B-1, "Nailing Schedule," and Table 23-II-B-2, "Wood Structural Panel Roof Sheathing Nailing Schedule," in the Uniform Building Code.
 - 4. Table 2305.2, "Fastening Schedule," in the BOCA National Building Code.
 - 5. Table 2306.1, "Fastening Schedule," in the Standard Building Code.
 - 6. Table 602.3(1), "Fastener Schedule for Structural Members," and Table 602.3(2), "Alternate Attachments," in the International One- and Two-Family Dwelling Code.
- E. Use common wire nails, unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; predrill as required.

3.2 WOOD BLOCKING, AND NAILER INSTALLATION

- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated. Build anchor bolts into masonry during installation of masonry work. Where possible, secure anchor bolts to formwork before concrete placement.

END OF SECTION

INTERIOR ARCHITECTURAL WOODWORK

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary General Conditions and Division-1 Specification sections, apply to work of this section.

1.2 SUMMARY

A. This section includes the following:

1. Plastic-laminate clad cabinets.
2. Plastic-laminate countertops and supports.

B. Related Sections: The following Sections contain requirements that relate to this Section:

1. Division 6 Section "Rough Carpentry" for furring, blocking, and other carpentry work concealed in the wall.
2. Division 9 Section "Painting" for field finishing of installed interior standing and running trim.

1.3 DEFINITIONS

A. Interior architectural woodwork includes wood furring, blocking, shims, and hanging strips for installing woodwork items unless concealed within other construction prior to woodwork installation.

1.4 SUBMITTALS

A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections.

B. Product data for each type of product and process specified and incorporated into items of architectural woodwork during fabrication, finishing, and installation.

C. Shop drawings showing location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.

1. Show locations and sizes of furring, blocking, and hanging strips, including concealed blocking and reinforcing specified in other Sections.
2. Show locations and sizes of cutouts and holes for plumbing fixtures, faucets, soap dispensers, and other items installed in architectural woodwork.

D. Samples for initial selection of the following in the form of manufacturer's color charts consisting of actual units or sections of units showing the full range of colors, textures, and patterns available for each type of material indicated.

1. Plastic laminates.
2. Shop-applied transparent finishes.
3. Shop-applied opaque finishes.

E. Samples for verification of the following:

1. Lumber with or for transparent finish, 50 sq. in., for each species and cut, finished on one side and one edge.
2. Veneer leaves representative of and selected from flitches to be used for transparent-finished woodwork.
3. Wood-veneer-faced panel products, with or for transparent finish, 8 by 10 inches, for each species and cut. Include at least one face-veneer seam and finish one-half of face as specified.
 - a) Step finish materials on sample to show and clearly define each coat.
 - b) Provide separate samples of unfaced panel product used for core.

F. Product certificates signed by woodwork fabricator certifying that products comply with specified requirements.

G. Qualification data for firms and persons specified in the "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

1.5 QUALITY ASSURANCE

A. Fabricator Qualifications: Firm experienced in producing architectural woodwork similar to that indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units without delaying the Work.

B. Single-Source Responsibility for Fabrication and Installation: Engage a qualified woodworking firm to assume undivided responsibility for fabricating, finishing, and installing woodwork specified in this Section.

C. Quality Standard: Except as otherwise indicated, comply with the following standard:

1. AWI Quality Standard: "Architectural Woodwork Quality Standards" of the Architectural Woodwork Institute for grades of interior architectural woodwork, construction, finishes, and other requirements.
 - a) Provide AWI Certification Labels or Certificates of Compliance indicating that woodwork meets requirements of grades specified.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Protect woodwork during transit, delivery, storage, and handling to prevent damage, soilage, and deterioration.

B. Do not deliver woodwork until painting and similar operations that could damage, soil, or deteriorate woodwork have been completed in installation areas. If woodwork must be stored in other than installation areas, store only in areas whose environmental conditions meet requirements specified in "Project Conditions."

1.7 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver or install woodwork until building is enclosed, wet-work is completed, and HVAC system is operating and will maintain temperature and relative humidity at occupancy levels during the remainder of the construction period.

- B. Field Measurements: Where woodwork is indicated to be fitted to other construction, check actual dimensions of other construction by accurate field measurements before fabrication, and show recorded measurements on final shop drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
1. Verify locations of concealed framing, blocking, reinforcements, and furring that support woodwork by accurate field measurements before being enclosed. Record measurements on final shop drawings.
 2. Where field measurements cannot be made without delaying the Work, guarantee dimensions and proceed with fabricating woodwork without field measurements. Provide allowance for trimming at site and coordinate construction to ensure that actual dimensions correspond to guaranteed dimensions.

1.8 COORDINATION

- A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that interior architectural woodwork can be supported and installed as indicated.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. General: Provide materials that comply with requirements of the AWI quality standard for each type of woodwork and quality grade indicated and, where the following products are part of interior woodwork, with requirements of the referenced project standards that apply to product characteristics indicated:
1. Hardboard: AHA A135.4.
 2. Particleboard: ANSI A208.1, Grade M-2.
 3. Softwood Plywood: PS 1.
 4. Hardwood Plywood and Face Veneers: HPVA HP-1.
- B. Particleboard: ANSI A208.1, Grade M-2 made with phenol-formaldehyde resins.
- C. High-Pressure Decorative Laminate: NEMA LD 3, grades as indicated, or if not indicated, as required by woodwork quality standard.
1. Manufacturer: Subject to compliance with requirements, provide high-pressure decorative laminates by one of the following:
 - a) Formica Corporation.
 1. Base and wall cabinets Aged Ash 8844-WR Woodbrush finish
 2. Edge Banding: Doelken; Color: TBD
- D. Adhesive for Bonding Plastic Laminate: Contact cement.

2.2 CABINET HARDWARE

- A. General: Provide cabinet hardware and accessory materials associated with architectural cabinets.
- B. Hardware Standard: Comply with BHMA A156.9 for items indicated by reference to BHMA numbers or referenced to this standard.

- C. Exposed Hardware Finishes: For exposed hardware, provide finish that complies with the following:
 - 1. Satin Chrome - US26D
- D. For concealed hardware provide manufacturer's standard finish that complies with product class requirements of BHMA A156.9.
- E. Cabinet Hardware:
 - 1. Hinges: institutional type; heavy-duty; Haele concealed hinges; 700 Silentia Soft Close Series.
 - a) Mount hinges to door and cabinet front with nine #7 flat-head screws per hinge.
 - b) Provide one pair for doors less than 4 feet high; 150 lb. Minimum.
 - 2. Friction Catch: BHMA B83021 or B83041, two metal prongs held by spring tension to engage metal strike mounted on door, with nylon roller catch.
 - a) Position on right-hand door of double units.
 - b) Product: Amrock #CM-9823-326, zinc perma-bright finish.
 - 3. Elbow Catch: BHMA B83021, cadmium-plated. Locate one on left-hand door of double-door unit.
 - 4. Pulls – 5" centers: Model No. Bp9364-G10 from the Essential "Z" Collection, Amerock
 - 5. Provide silencers at all cabinet doors – top and bottom outside corners of cabinet doors.
 - 6. Shelf Standards and Supports: Knappe & Vogt No. 255 ZC pilaster shelf standards, No. 256 ZC shelf supports.
 - 7. Grommets, for cable passage through countertops: 2 ½ inch OD, molded-plastic grommets with 1 inch hole and plastic cap with slot for wire passage. Color will be selected by Architect from manufacturer's standard range.

2.3 FABRICATION, GENERAL

- A. Interior Woodwork Grade: Provide interior woodwork complying with the referenced quality standard and of the following grade:
 - 1. Grade: Custom.
- B. Wood Moisture Content: Comply with requirements of referenced quality standard for wood moisture content in relation to relative humidity conditions existing during time of fabrication and in installation areas.
- C. Fabricate woodwork to dimensions, profiles, and details indicated. Ease edges to radius indicated for the following:
 - 1. Corners of cabinets and edges of solid-wood (lumber) members and rails: 1/16 inch.
- D. Complete fabrication, including assembly, finishing, and hardware application, before shipment to Project site to maximum extent possible. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for

scribing, trimming, and fitting.

1. Trial fit assemblies at the fabrication shop that cannot be shipped completely assembled. Install dowels, screws, bolted connectors, and other fastening devices that can be removed after trial fitting. Verify that various parts fit as intended and check measurements of assemblies against field measurements indicated on approved shop drawings before disassembling for shipment.

2.4 LAMINATE CLAD CABINETS (PLASTIC-COVERED CASEWORK)

- A. Quality Standard: Comply with AWI Section 400 requirements for laminate-clad cabinets.
 1. Grade: Custom.
- B. AWI Type of Cabinet Construction: Flush overlay.
- A. Laminate Cladding for Exposed Surfaces: High-pressure decorative laminate complying with the following requirements:
 1. Horizontal Surfaces Other than Tops: GP-50, 0.050-inch nominal thickness.
 2. Vertical Surfaces: GP-28, 0.028-inch nominal thickness.
 3. Edges: GP-50, 0.050-inch nominal thickness.
- B. Materials for Semi-exposed Surfaces: Provide surface materials indicated below:
 1. Surfaces Other than Drawer Bodies: Thermoset decorative overlay.
 2. Drawer Sides and Backs: Solid hardwood lumber, shop finished.
 3. Drawer Bottoms: Hardwood plywood, shop finished.
- C. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:
 1. Provide Architect's selections from laminate manufacturer's full range of colors and finishes in the following categories:
 - a. Base and wall cabinets Neutral Weft 5875-58 matte finish
- D. Provide dust panels of 1/4 -inch plywood or tempered hardboard above compartments and drawers except where located directly under tops.

2.5 COUNTERTOPS AND SUPPORTS

- A. SOLID-SURFACING-MATERIAL COUNTERTOPS
 1. Quality Standard: Comply with AWI Section 400 requirements for countertops.
 2. Quality Standard: Comply with WIC Section
 3. Grade: Premium
 4. Solid-Surfacing-Material Thickness: 3/4 inch
 5. Colors, Patterns, and Finishes: Provide materials and products that result in colors of solid-surfacing material complying with the following requirements:
 - a. Corian (Reference Finish Schedule)

6. Fabricate tops in one piece with shop-applied backsplashes and edges, unless otherwise indicated. Comply with solid-surfacing-material manufacturer's written recommendations for adhesives, sealers, fabrication, and finishing.

7. Rakks Bracket Concealed; inside wall flush concealed

PART 3 – EXECUTION

3.1 PREPARATION

- A. Condition woodwork to average prevailing humidity conditions in installation areas before installing.
- B. Before installing architectural woodwork, examine shop-fabricated work for completion and complete work as required, including back priming and removal of packing.

3.2 INSTALLATION

- A. Quality Standard: Install woodwork to comply with AWI Section 1700 for the same grade specified in Part 2 of this Section for type of woodwork involved.
- B. Install woodwork plumb, level, true, and straight with no distortions. Shim as required with concealed shims. Install to a tolerance of 1/8 inch in 96 inches for plumb and level (including tops).
- C. Scribe and cut woodwork to fit adjoining work and refinish cut surfaces or repair damaged finish at cuts.
- D. Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure to grounds, stripping and blocking with countersunk, concealed fasteners and blind nailing as required for complete installation. Use fine finishing nails for exposed nailing, countersunk and filled flush with woodwork and matching final finish where transparent finish is indicated.
- E. Standing and Running Trim: Install with minimum number of joints possible, using full-length pieces (from maximum length of lumber available) to the greatest extent possible. Do not use pieces less than 36 inches long, except where necessary. Stagger joints in adjacent and related members. Fill gaps, if any, between top of base and wall with plastic wood filler, sand smooth, and finish same as wood base, if finished.
 1. Install standing and running trim with no more than 1/8 inch in 96 –inch variation from a straight line.
- F. Cabinets: Install without distortion so that doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete the installation of hardware and accessory items as indicated.
 1. Install cabinets with no more than 1/8 inch in 96-inch sag, bow, or other variation from a straight line.
- G. Tops: Anchor securely to base units and other support systems as indicated. Calk space between backsplash and wall with specified sealant.
 1. Install countertops with no more than 1/8 inch in 96-inch sag, bow, or other variation from a straight line.

2. Secure backsplashes to tops with concealed metal brackets at 16 inches o.c.
- H. Complete the finishing work specified in this Section to the extent not completed at shop or before installation of woodwork. Fill nail holes with matching filler where exposed. Apply specified finish coats, including stains and paste fillers if any, to exposed surfaces where only seal/prime coats were applied in the shop.
 1. Top edges of liner shall be formed with reinforced edge to be concealed by wood trim.
- I. Refer to Division 9 Sections for final finishing of installed architectural woodwork with transparent finish.

3.3 ADJUSTING AND CLEANING

- A. Repair damaged and defective woodwork where possible to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.
- B. Clean, lubricate, and adjust hardware.

3.4 PROTECTION

- A. Provide final protection and maintain conditions in a manner acceptable to Fabricator and Installer that ensures that woodwork is without damage or deterioration at the time of Substantial Completion.

END OF SECTION

BUILDING INSULATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Insulation under slabs-on-grade.
 - 2. Concealed building insulation.
 - 3. Safing insulation.
 - 4. Vapor Retarder
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 4 Section 04810 "Unit Masonry Assemblies"
 - 2. Division 9 Section 09260 "Gypsum Board Assemblies."

1.3 SUBMITTALS

- A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections.
- B. Product Data for each type of insulation product specified.
- C. Product test reports from and based on tests performed by a qualified independent testing agency evidencing compliance of insulation products with specified requirements including those for thermal resistance, fire-test-response characteristics, water-vapor transmission, water absorption, and other properties, based on comprehensive testing of current products.
- D. Research or evaluation reports of the model code organization acceptable to authorities having jurisdiction that evidence compliance of foam-plastic insulations with building code in effect for Project.

1.4 QUALITY ASSURANCE

- A. Single-Source Responsibility for Insulation Products: Obtain each type of building insulation from a single source with resources to provide products complying with requirements indicated without delaying the Work.
- B. Fire-Test-Response Characteristics: Provide insulation and related materials with the fire-test-response characteristics indicated on Drawings or specified elsewhere in this Section as determined by testing identical products per test method indicated below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting agency.
 - 1. Surface-Burning Characteristics: ASTM E 84.
 - 2. Fire-Resistance Ratings: ASTM E 119.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Protect insulation materials from physical damage and from deterioration by moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering insulation products that may be incorporated in the work include, but are not limited to, the following:
 - 1. Extruded-Polystyrene Board Insulation:
 - a. Amoco Foam Products Company.
 - b. DiversiFoam Products.
 - c. Dow Chemical Co.
 - d. UC Industries, Inc.; Owens-Corning Co.
 - 2. Glass-Fiber Insulation:
 - a. CertainTeed Corporation.
 - b. Knauf Fiber Glass GmbH.
 - c. Owens-Corning Fiberglas Corporation.
 - d. Schuller International, Inc.

2.2 INSULATING MATERIALS

- A. General: Provide insulating materials that comply with requirements and with referenced standards.
 - 1. Preformed Units: Sizes to fit applications indicated; selected from manufacturer's standard thicknesses, widths, and lengths.
- B. Extruded-Polystyrene Board Insulation: Rigid, cellular polystyrene thermal insulation formed from polystyrene base resin by an extrusion process using hydrochlorofluorocarbons as blowing agent to comply with ASTM C 578 for type and with other requirements indicated below:
 - 1. Type IV, 1.60-lb/cu. ft. minimum density, unless otherwise indicated.
 - 2. Surface-Burning Characteristics: Maximum flame-spread and smoke-developed indices of 75 and 450, respectively.
- C. Unfaced Mineral-Fiber Blanket Insulation: Thermal insulation combining mineral fibers of type described below with thermosetting resins to comply with ASTM C 665, Type I (blankets without membrane facing).
 - 1. Mineral-Fiber Type: Fibers manufactured from glass.
 - 2. Surface-Burning Characteristics: Maximum flame-spread and smoke-developed indices of 25 and 50, respectively.

D. Faced Mineral-Fiber Blanket Insulation: Thermal insulation combining mineral fibers of type described below with thermosetting resins to comply with ASTM C 665, Type III, Class A (blankets with reflective vapor-retarder membrane facing and flame spread of 25 or less); with foil-scrim-kraft, foil-scrim, or foil-scrim-polyethylene vapor-retarder membrane on 1 face.

1. Mineral-Fiber Type: Fibers manufactured from glass.
2. Flanged Units: Provide blankets fabricated with facing incorporating 5-inch-wide flanges along edges for attachment to framing members.

E. SAFING INSULATION AND ACCESSORIES

F. Slag-Wool-Fiber Board Safing Insulation: Semirigid boards designed for use as fire stop at openings between edge of slab and exterior wall panels, produced by combining slag-wool fibers with thermosetting resin binders to comply with ASTM C 612, Type IA and IB; nominal density of 4 lb/cu. ft.; passing ASTM E 136 for combustion characteristics; thermal resistivity of 4 deg F x h x sq. ft./Btu x in. at 75 deg F.

G. Calking Compound: Material approved by manufacturer of safing insulation for sealing joint between foil backing of safing insulation and edge of concrete floor slab against penetration of smoke.

H. Safing Clips: Galvanized steel safing clips approved by manufacturer of safing insulation for holding safing insulation in place.

2.3 AUXILIARY INSULATING MATERIALS

A. Adhesive for Bonding Insulation: Product with demonstrated capability to bond insulation securely to substrates indicated without damaging insulation and substrates.

B. Protection Board: Premolded, semirigid asphalt/fiber composition board, 1/4 inch thick, formed under heat and pressure, standard sizes.

C. Eave Ventilation Troughs: Preformed rigid fiberboard or plastic sheets designed and sized to fit between roof framing members and to provide cross ventilation between insulated attic spaces and vented eaves.

2.4 INSULATION FASTENERS

A. Adhesively Attached, Spindle-Type Anchors: Plate welded to projecting spindle; capable of holding insulation, of thickness indicated, securely in position indicated with self-locking washer in place; and complying with the following requirements:

1. Plate: Perforated galvanized carbon-steel sheet, 0.030 inch thick by 2 inches square.
2. Spindle: Copper-coated low carbon steel, fully annealed, 0.105 inches in diameter, length to suit depth of insulation indicated.

B. Insulation-Retaining Washers: Self-locking washers formed from 0.016-inch-thick galvanized steel sheet, with beveled edge for increased stiffness, sized as required to hold insulation securely in place, but not less than 1-1/2 inches square or in diameter.

1. Where spindles will be exposed to human contact after installation, protect ends with capped self-locking washers incorporating a spring steel insert to ensure permanent retention of cap.

- C. Anchor Adhesive: Product with demonstrated capability to bond insulation anchors securely to substrates indicated without damaging insulation, fasteners, and substrates.

2.5 VAPOR RETARDER

- A. Polyethylene Vapor Retarder: ASTM D 4397, 6 mils thick, with maximum permeance rating of 0.13 perm.
- B. Vapor-Retarder Tape: Pressure-sensitive tape of type recommended by vapor retarder manufacturer for sealing joints and penetrations in vapor retarder.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements of Sections in which substrates and related work are specified and to determine if other conditions affecting performance of insulation are satisfactory. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean substrates of substances harmful to insulations or vapor retarders, including removing projections capable of puncturing vapor retarders or that interfere with insulation attachment.

3.3 INSTALLATION, GENERAL

- A. Comply with insulation manufacturer's written instructions applicable to products and application indicated.
- B. Install insulation that is undamaged, dry, unsoiled, and has not been exposed at any time to ice and snow.
- C. Extend insulation in thickness indicated to envelop entire area to be insulated. Cut and fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.
- D. Apply single layer of insulation to produce thickness indicated, unless multiple layers are otherwise shown or required to make up total thickness.

3.4 INSTALLATION OF PERIMETER AND UNDER-SLAB INSULATION

- A. On vertical surfaces, set units in adhesive applied according to manufacturer's written instructions. Use adhesive recommended by insulation manufacturer.
- B. Protect below-grade insulation on vertical surfaces from damage during backfilling by applying protection board. Set in adhesive according to written instructions of insulation manufacturer.

3.5 INSTALLATION OF GENERAL BUILDING INSULATION

- A. Apply insulation units to substrates by method indicated, complying with manufacturer's written instructions. If no specific method is indicated, bond units to substrate with adhesive or use mechanical anchorage to provide permanent placement and support of units.

- B. Seal joints between closed-cell (nonbreathing) insulation units by applying adhesive, mastic, or sealant to edges of each unit to form a tight seal as units are shoved into place. Fill voids in completed installation with adhesive, mastic, or sealant as recommended by insulation manufacturer.
- C. Set vapor-retarder-faced units with vapor retarder to warm side of construction, unless otherwise indicated. Do not obstruct ventilation spaces, except for firestopping.
 - 1. Tape joints and ruptures in vapor retarder, and seal each continuous area of insulation to surrounding construction to ensure airtight installation.
- D. Install mineral-fiber blankets in cavities formed by framing members according to the following requirements:
 - 1. Use blanket widths and lengths that fill cavities formed by framing members. Where more than one length is required to fill cavity, provide lengths that will produce a snug fit between ends.
 - 2. Place blankets in cavities formed by framing members to produce a friction fit between edges of insulation and adjoining framing members.
- E. Install board insulation on concrete substrates by adhesively attached, spindle-type insulation anchors as follows:
 - 1. Fasten insulation anchors to concrete substrates with insulation anchor adhesive according to anchor manufacturer's written instructions. Space anchors according to insulation manufacturer's written instructions for insulation type, thickness, and application indicated.
 - 2. After adhesive has dried, install board insulation by pressing insulation into position over spindles and securing it tightly in place with insulation-retaining washers, taking care not to compress insulation below indicated thickness.
 - 3. Where insulation will not be covered by other building materials, apply capped washers to tips of spindles.
- F. Install board insulation in curtain wall construction as indicated on Drawings and according to curtain wall manufacturer's written instructions.
 - 1. Brace insulation where it contacts safing insulation to prevent insulation from bowing under pressure from safing insulation.

3.6 INSTALLATION OF SAFING INSULATION

- A. Install safing insulation on safing clips spaced as needed to support insulation, but not further apart than 24 inches o.c. Cut safing insulation wider than gap to be filled to ensure compression fit and seal joint with calking approved by safing insulation manufacturer for this purpose. Leave no voids in completed installation.

3.7 INSTALLATION OF VAPOR RETARDERS

- A. General: Extend vapor retarder to extremities of areas to be protected from vapor transmission. Secure in place with adhesives or other anchorage system as indicated. Extend vapor retarder to cover miscellaneous voids in insulated substrates.

- B. Seal vertical joints in vapor retarders over framing by lapping not less than 2 wall studs. Fasten vapor retarders to framing at top, end, and bottom edges; at perimeter of wall openings; and at lap joints. Space fasteners 16 inches o.c.
- C. Seal overlapping joints in vapor retarders with adhesives or vapor-retarder tape according to vapor retarder manufacturer's instructions. Seal butt joints and fastener penetrations with vapor-retarder tape. Locate all joints over framing members or other solid substrates.
- D. Firmly attach vapor retarders to substrates with mechanical fasteners or adhesives as recommended by vapor retarder manufacturer.
- E. Seal joints caused by pipes, conduits, electrical boxes, and similar items penetrating vapor retarders with vapor-retarder tape to create an airtight seal between penetrating objects and vapor retarder.
- F. Repair any tears or punctures in vapor retarders immediately before concealment by other work. Cover with vapor-retarder tape or another layer of vapor retarder.

3.8 PROTECTION

- A. General: Protect installed insulation and vapor retarders from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings or enclosures where insulation is subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

END OF SECTION

JOINT SEALERS

PART 1 – GENERAL

1.1 DESCRIPTION OF WORK

- A. Provide all joint sealer Work as indicated on the Drawings, as required for the completed Work, and as specified herein. The Work shall include, but shall not be limited to, the following:
 - 1. Vertical joints between metal door trim, display boards, display cases, panel boards and wainscots and other facing materials.
 - 2. Vertical control joints and expansion joints.
 - 3. Exterior frames at metal windows, metal door frames, metal subframes, and at other junctures of different materials.
 - 4. Joints in walks, pavements and curbs.

1.2 RELATED SECTIONS

- A. Section 03300 - Cast-in-Place Concrete
- B. Section 04810 - Unit Masonry Assemblies
- C. Section 08110 - Steel Doors and Frames
- D. Section 08550 - Wood Windows
- E. Section 09260 - Gypsum Board Assemblies
- F. Section 09511 - Suspended Acoustical Ceilings

1.3 REFERENCES

- A. American Society for Testing and Materials (ASTM)

1.4 SUBMITTALS

- A. Product Data
 - 1. Catalog sheets, specifications, and installation instructions for each product specified except miscellaneous materials.
- B. Samples
 - 1. Sealants: One pint or standard tube.
 - 2. Joint Fillers: 24" long full section.
 - 3. Gaskets: 24" long full section.
 - 4. Joint Primer/Sealer/Conditioners: One pint.
 - 5. Backer Rods: 24" long full section.
 - 6. Bond Breaker Tape: 24" long full section.

C. Quality Control Submittals

1. Installer's Qualifications Data: Affidavit required under Quality Assurance Article.
2. Company Field Advisor Data: Name, business address, and telephone number of Company Field Advisor.

1.5 QUALITY ASSURANCE

A. Installer's Qualifications: The persons installing the sealants and their supervisor shall be personally experienced in the installation of sealants and shall have been regularly employed by a company engaged in the installation of sealants for a minimum of two years.

1. Furnish to the Authority the names and addresses of five similar projects which the foregoing people have worked on during the past two years.
2. Furnish a letter from the sealant manufacturer, stating that the foregoing people are authorized to install the manufacturer's sealant materials and that the manufacturer's specifications are applicable to the requirements of this Project.

B. Container Labels: Include manufacturer's name, trade name of product, kind of material, federal specification number (if applicable), expiration date (if applicable), and packaging date or batch number.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle joint sealer materials as recommended by the Manufacturer, to protect from damage.

1.7 PROJECT CONDITIONS

A. Environmental Requirements

1. Temperature: Unless otherwise approved or recommended in writing by the sealant manufacturer, do not install sealants at temperatures below 40 degrees F or above 85 degrees F.
2. Humidity and Moisture: Do not install the Work of this Section under conditions that are detrimental to the application, curing, and performance of the materials.
3. Ventilation: Provide sufficient ventilation wherever sealants, primers, and other similar materials are installed in enclosed spaces. Follow manufacturer's recommendations.

B. Protection

1. Protect all surfaces adjacent to sealants with non-staining removable tape or other approved covering to prevent soiling or staining.
2. Protect all other surfaces in the Work area with tarps, plastic sheets, or other approved covering to prevent defacement from droppings.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. General Electric Co., Waterford, NY 12188

- B. Dow Corning Corp., Midland, Michigan 48686
- C. Pecora Corp., Harleyville, PA
- D. ChemRex Inc. - Sonneborn, Shakopee, MN 55379
- E. Tremco Sealing and Coatings, Wading River, NY 11792
- F. Bostik, Midland, MA 01949
- G. Protective Treatments, Inc.(PTI), Dayton, OH 45413
- H. Products Research & Chemical Corp., Gloucester City, NJ 08030
- I. Sika, Lindhurst, NJ 07071
- J. Mameco International, Inc./RPM, Cleveland, Ohio 44128

2.2 **SEALANTS**

A. **Type 1 Sealant:** (for use in vertical expansion joints where extensive movement occurs; for general purpose use around windows, door frames, louvers, and other junctures).

1. One-part low-medium modulus silicone sealant (plus or minus 50% movement); ASTM C920 classifications type S, grade NS, class 25, uses NT, M, G, and A.
 - a. General Electric Silpruf, Dow Corning's 791, Pecora's 864, Sonneborn's Omniseal, or Tremco Spectrem 2.
2. Silicones shall meet the following requirements:
 - a. ASTM C719 - Low-Medium Modulus (+ or - 50%). Sealants shall not exhibit any cracking or surface degradation after 5000 hours exposure in the Atlas Twin Arc Weatherometer.
 - b. ASTM C661 - Shall not incur a durometer increase greater than 10 points.
 - c. Sealants shall contain zero parts of toxic isocyanurate ingredients.
3. Thoroughly clean surfaces on which sealant is to be applied and prime surfaces as recommended by Manufacturer before applying sealant.

B. **Type 1A Sealant:** (for use for pavements, walks, and curbs)

1. For Horizontal Joints: Two-part, self-leveling polyurethane sealant for traffic bearing construction; ASTM C920 classifications type M, grade P, class 25, uses T, M, A, and O (granite).
 - a. Mameco's Vulkem 255, Pecora's Urexpan NR-200, or Bostik's Chem-Calk 550, Products Research & Chemical's RC-2SL, or Tremco THC 900/901.
2. For Vertical Joints: Two-part, non-sag polyurethane sealant; ASTM C920 classifications type M, grade NS, class 25, uses NT, M, A and O (granite).
 - a. Mameco's Vulkem 227, Pecora's Dynatrol II, or Bostik's Chem-Calk 500,

Products Research & Chemical's RC-2, or Tremco Dymeric 511.

C. Type 1B Sealant: (for Plaza Decks)

1. For Horizontal Joints: One-part, self-leveling polyurethane sealant for traffic bearing construction.
 - a. Mameco's Vulkem 45, Pecora's Urexpan NR-201, or Sika's Sikaflex-12SL, Products Research & Chemical's PR-6006, or Tremco Tremflex.
2. For Vertical Joints: One-part, non-sag polyurethane sealant; ASTM C920 classifications type S, grade NS, class 25, uses NT, M, A and O (granite).
 - a. Mameco's Vulkem 116, Pecora's Dynatrol I, or Sika's Sikaflex 1a, Products Research & Chemical's RC-1, or Tremco Dymonic.

D. Type 1C Sealant: (use at interior wet areas only-- Bath and Shower areas)

1. One-part, mildew resistant silicone sealant; ASTM C920 classifications type S, grade NS, class 25, uses NT, M, G and A.
 - a. Dow Corning's 786, General Electric's Sanitary 1700, Bostik's Silicone Rubber Bathroom Caulk, or Tremco Proglaze.

E. Type 2 Sealant: (for joints & cracks 1/4" or less in width)

1. One-part acrylic polymer sealant
 - a. Pecora's 60+ Unicrylic, PTI's 738, or Tremco's Mono.

F. Type 2A Sealant: (joints & cracks 1/4" or less in width).

1. One-part clear acrylic sealant for sealing small joints
 - a. PTI's 200 or Tremco's 830.

G. Type 3 Sealant: (for concealed bedding only).

1. One-part butyl rubber sealant
 - a. Pecora's BC-158, PTI's 707, Bostik's Chem-Calk 300, or Tremco Butyl.

H. Type 4 Sealant: (use at high temperature applications, e.g., flues)

1. One-part silicone sealant for high temperature; ASTM C920 classifications type S, grade NS, class 25, uses NT, M, G, and A.
 - a. Dow Corning's Silastic 726 RTV, General Electric's RTV 106, or Tremco Spectrem 1.

I. Type 5 Sealant: (use at relieving angles - between brick and asphalt-impregnated fabric/copper flashing).

1. One-part polyurethane sealant; ASTM C920 classifications type S, grade NS, class 25,

uses NT, M, and A.

- a. Only Bostik's Chem Calk 900 or Tremco's Dymonic will be acceptable.

J. Pre-formed Sealant

1. Bitumen impregnated flexible polyurethane foam precompressed to 20% of its uncompressed length such as Progress Unlimited's Compriband. Consult with manufacturer for proper sizing of material.

K. Sealant Colors

1. For exposed materials, provide color as indicated or, if not indicated, as selected by the Project Architect from manufacturer's standard colors. For concealed materials, provide the natural color which has the best overall performance characteristics.

2.3 JOINT FILLERS

- A. Closed Cell Neoprene Joint Filler (for precast panel joints not compatible with Silicone Sealants): ASTM D 1056, Class SC (oil resistant and medium swell), 2 to 5 psi compression deflection.
- B. Expanded Polyethylene Joint Filler (for existing joints): Flexible, compressible, closed-cell polyethylene of not less than 10 psi compression deflection (25 percent).
- C. Closed-Cell Polyurethane or Closed-Cell Expanded polyethylene Joint Filler (for all cast-in-place concrete work): Resilient, compressible, semi-rigid.
 1. W.R. Meadow's Ceramar; A.C. Horn's Closed Cell Plastic Foam Filler, Code 5401; Sonneborn's Sonoflex F.
- D. ASTM D1056, Class RE41 (for masonry joints) where shown on the Drawings.
- E. Filler Sealant (for Parapet Expansion Joints): Polybutylene impregnated compressible polyurethane foam precompressed to 50% of its uncompressed length.
 1. "Polytite" by Polytite Manufacturing Corp. and distributed by W.R. Grace Co.

2.4 ACOUSTICAL SEALANT

- A. Acoustical Sealant for Exposed and Concealed Joints: Manufacturer's standard nonsag, paintable, nonstaining latex sealant complying with ASTM C 834 and the following requirements:
 1. Product is effective in reducing airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies per ASTM E 90.
 1. Product has flame-spread and smoke developed ratings of less than 25 per ASTM E 84.
- B. Products: Subject to compliance with requirements, provide one of the following:
 1. Acoustical Sealant:
 - a) AC-20 FTR Acoustical and Insulation Sealant, Pecora Corp.
 - b) SHEETROCK Acoustical Sealant, United States Gypsum Co.

c) FS-One, Hilti, Inc.

C. Locations: Voids at top of non-rated walls and partitions and penetrations through non-rated walls and partitions.

2.5 MISCELLANEOUS MATERIALS

A. Joint Primer/Sealer/Conditioner: As recommended by the sealant manufacturer for the particular joint surface materials and conditions.

B. Backer Rod: Compressible rod stock of expanded, extruded closed-cell polyethylene.

C. Bond Breaker Tape: Polyethylene or other plastic tape as recommended by the sealant manufacturer; non-bonding to sealant; self-adhesive where applicable.

D. Cleaning Solvents: Oil free solvents as recommended by the sealant manufacturer. Do not use reclaimed solvents.

E. Masking Tape: Removable paper or fiber tape, self-adhesive, non-staining.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine all joint surfaces for conditions that may be detrimental to the performance of the completed Work. Do not proceed until satisfactory corrections have been made.

3.2 PREPARATION

A. Clean joint surfaces immediately before installation of sealant and other materials specified in this Section.

1. Remove all loose materials, dirt, dust, rust, oils and other foreign matter that will impair the performance of materials installed under this Section.
2. Remove lacquers, protective coatings and similar materials from joint faces with manufacturer's recommended solvents.
3. Do not limit cleaning of joint surfaces to solvent wiping. Use methods such as grinding, acid etching or other approved and manufacturer's recommended means, if required, to clean the joint surfaces, assuring that the sealant materials will obtain positive and permanent adhesion.

B. For Pavements, Walks, and Curbs

1. Set joint fillers at proper depth and position as required for installation of bond breakers, backer rods, and sealants. Do not leave voids or gaps between the ends of joint filler units.
 - a. Smooth Edged Joints: For joints between two concrete slabs or where new concrete abuts smooth-edged materials, use either cork joint filler or closed cell polyurethane joint filler.
 - b. Irregular Edged Joints: For joints where new concrete abuts granite curbs or other irregular edges, use closed cell polyurethane joint filler.
 - c. Priming Joint Surfaces:

1. Prime joints which are to receive Type 1A and 1B Sealants.
2. For joints of friable (crumbly, chalky) masonry surfaces and other surfaces which are to receive Type 1 Sealant, prime as recommended by Manufacturer.
3. Prime joints other than those above if so recommended by the manufacturer's printed instructions.
4. Do not allow the primer/sealer to spill or migrate onto adjoining surfaces.

3.3 JOINT BACKING INSTALLATION

- A. Install bond breaker tape in relaxed condition as it comes off the roll. Do not stretch the tape. Lap individual lengths.
- B. Install backer rod of sufficient size to fill the joint width at all points in a compressed state. Compress backer rod at the widest part of the joint by a minimum of 25 percent. Do not cut or puncture the surface skin of the rod.

3.4 SEALANT INSTALLATION

- A. Except as shown or specified otherwise, install sealants in accordance with the manufacturer's printed instructions.
- B. Install sealants with ratchet hand gun or other approved mechanical gun. Where gun application is impracticable, install sealant by knife or by pouring, as applicable.
- C. Types 2 and 2A Sealants: If low temperature makes application difficult, preheat sealants using manufacturer's recommended heating equipment.
- D. Finishing: Tool all vertical, non-sag sealants so as to compress the sealant, eliminating all air voids and providing a neat smoothly finished joint. Provide slightly concave joint surface, unless otherwise indicated or recommended by the manufacturer.
 1. Use tool wetting agents as recommended by the sealant manufacturer.

3.5 FIELD QUALITY CONTROL

- A. Test Samples
 1. If requested by the Authority, for each 1000 linear feet of joint installed, cut out and carefully remove a 6" long sample of the undisturbed sealant and joint backer material from the newly installed Work. Remove the samples in the presence of the Authority's Representative, who will retain them for evaluating and testing.
 2. Reseal cutout areas with the same type materials.

3.6 CLEANING

- A. Immediately remove misapplied sealant and droppings from metal surfaces with solvents and wiping cloths. On other materials, remove misapplied sealant and droppings by methods and materials recommended in writing by the manufacturer of the sealant material.
- B. After sealants are applied and before skin begins to form on sealant, remove all masking

and other protection and clean up remaining defacement caused by the Work.

END OF SECTION

STEEL DOORS AND FRAMES

PART 1 – GENERAL

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary General Conditions and Division-1 Specification sections, apply to work of this section.

1.1 SUMMARY

- A. This section includes steel doors and frames.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 8 Section "Door Hardware" for door hardware and weatherstripping.
 - 2. Division 9 Section "Gypsum Board Assemblies" for installing frames in gypsum board partitions.
 - 3. Division 9 Section "Painting" for field painting primed doors and frames.

1.2 SUBMITTALS

- A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections.
- B. Product Data for each type of door and frame specified, including details of construction, materials, dimensions, hardware preparation, core, label compliance, sound ratings, profiles, and finishes.
- C. Shop Drawings showing fabrication and installation of steel doors and frames. Include details of each frame type, elevations of door design types, conditions at openings, details of construction, location and installation requirements of door and frame hardware and reinforcements, and details of joints and connections. Show anchorage and accessory items.
- D. Door Schedule: Submit schedule of doors and frames using same reference numbers for details and openings as those on Contract Drawings.
 - 1. Indicate coordination of glazing frames and stops with glass and glazing requirements.

1.3 QUALITY ASSURANCE

- A. Provide doors and frames complying with ANSI/SDI 100 "Recommended Specifications for Standard Steel Doors and Frames" and as specified.
- B. Fire-Rated Door Assemblies: Units that comply with NFPA 80, are identical to door and frame assemblies tested for fire-test-response characteristics per ASTM E 152, and are labeled and listed by UL, Warnock Hersey, or another testing and inspecting agency acceptable to authorities having jurisdiction.
 - 1. Temperature-Rise Rating: Where indicated, provide doors that have a temperature-rise rating of 450 deg F maximum in 30 minutes of fire exposure.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver doors and frames cardboard-wrapped or crated to provide protection during transit and job storage. Provide additional protection to prevent damage to finish of factory-finished doors and frames.
- B. Inspect doors and frames on delivery for damage. Minor damages may be repaired provided refinished items match new work and are acceptable to Architect; otherwise, remove and replace damaged items as directed.
- C. Store doors and frames at building site under cover. Place units on minimum 4-inch-high wood blocking. Avoid using nonvented plastic or canvas shelters that could create a humidity chamber. If cardboard wrappers on doors become wet, remove cartons immediately. Provide minimum ¼ inch spaces between stacked doors to promote air circulation.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Steel Doors and Frames:
 - a) Amweld Building Products, Inc.
 - b) Ceco Door Products.
 - c) Fenestra Corp.
 - d) Kewanee Corp.
 - e) Republic Builders Products.
 - f) Steelcraft.

2.2 MATERIALS

- A. Hot-Rolled Steel Sheets and Strip: Commercial-quality carbon steel, pickled and oiled, complying with ASTM A 569.
- B. Cold-Rolled Steel Sheets: Carbon steel complying with ASTM A 366, commercial quality, or ASTM A 620, drawing quality, special killed.
- C. Galvanized Steel Sheets: Zinc-coated carbon steel complying with ASTM A 526, commercial quality, or ASTM A 642, drawing quality, hot-dip galvanized according to ASTM A 525, with A 60 or G 60 coating designation, mill phosphatized.
- D. Supports and Anchors: Fabricated from not less than 0.0478-inch-thick steel sheet; 0.0516-inch-thick galvanized sheet where used with galvanized steel frames.
- E. Inserts, Bolts, and Fasteners: Manufacturer's standard units. Where items are to be built into exterior walls, hot-dip galvanize complying with ASTM A 153, Class C or D as applicable.

2.3 FRAMES

- A. Provide metal frames for doors, transoms, sidelights, borrowed lights, and other openings, according to ANSI/SDI 100, and of types and styles as shown on Drawings and schedules. Conceal fastenings, unless otherwise indicated.

1. Fabricate frames with mitered or coped and continuously welded corners.
 2. Form interior frames from 16-gage (0.0598-inch-thick) cold-rolled steel sheet.
 3. Form exterior frames from 14-gage (0.0785-inch-thick) galvanized steel sheet.
- B. Door Silencers: Except on weather-stripped frames, drill stops to receive 3 silencers on strike jambs of single-door frames and 2 silencers on heads of double-door frames.
- C. Grout: When required in concrete construction, as specified in Division 3 Section "Concrete."

2.4 **FABRICATION**

- A. Fabricate steel door and frame units to be rigid, neat in appearance, and free from defects, warp, or buckle. Where practical, fit and assemble units in manufacturer's plant. Clearly identify work that cannot be permanently factory assembled before shipment, to assure proper assembly at Project site. Comply with ANSI/SDI 100 requirements.
1. Internal Construction: One of the following manufacturer's standard core materials according to SDI standards:
 - a) Rigid polyurethane conforming to ASTM C 591.
 2. Clearances: Not more than 1/8 inch at jambs and heads, except not more than 1/4 inch between non-fire-related pairs of doors. Not more than 3/4 inch at bottom.
- B. Tolerances: Comply with SDI 117 "Manufacturing Tolerances Standard Steel Doors and Frames."
- C. Galvanized Steel Doors, Panels, and Frames: For the following locations, fabricate doors, panels, and frames from galvanized steel sheet according to SDI 112. Close top and bottom edges of doors flush as an integral part of door construction or by addition of minimum 16-gage (0.0598-inch-thick) galvanized steel channels, with channel webs placed even with top and bottom edges. Seal joints in top edges of doors against water penetration.
1. At exterior locations.
- D. Exposed Fasteners: Unless otherwise indicated, provide countersunk flat or oval heads for exposed screws and bolts.
- E. Thermal-Rated (Insulating) Assemblies: At exterior locations and elsewhere as shown or scheduled, provide doors fabricated as thermal-insulating door and frame assemblies and tested according to ASTM C 236 or ASTM C 976 on fully operable door assemblies.
1. Unless otherwise indicated, provide thermal-rated assemblies with U-value rating of 0.41 Btu/sq. ft. x h x deg F or better.
 2. Interior doors to be provided with sound insulated cores.
- F. Hardware Preparation: Prepare doors and frames to receive mortised and concealed hardware according to final door hardware schedule and templates provided by hardware supplier. Comply with applicable requirements of SDI 107 and ANSI A115 Series specifications for door and frame preparation for hardware.
1. For concealed overhead door closers, provide space, cutouts, reinforcing, and provisions for fastening in top rail of doors or head of frames, as applicable.

- G. Reinforce doors and frames to receive surface-applied hardware. Drilling and tapping for surface-applied hardware may be done at Project site.
- H. Locate hardware as indicated on Shop Drawings or, if not indicated, according to the Door and Hardware Institute's (DHI) "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
- I. Glazing Stops: Minimum 20 gage (0.0359-inch-thick) steel or 0.040-inch-thick aluminum.
 - 1. Provide nonremovable stops on outside of exterior doors and on secure side of interior doors for glass, louvers, and other panels in doors.
 - 2. Provide screw-applied, removable, glazing beads on inside of glass, louvers, and other panels in doors.

2.5 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual" for recommendations relative to applying and designating finishes.
- B. Comply with SSPC-PA 1, "Paint Application Specification No. 1," for steel sheet finishes.
- C. Apply primers and organic finishes to doors and frames after fabrication.

2.6 GALVANIZED STEEL SHEET FINISHES

- A. Surface Preparation: Clean surfaces with nonpetroleum solvent so that surfaces are free of oil or other contaminants. After cleaning, apply a conversion coating of the type suited to the organic coating applied over it. Clean welds, mechanical connections, and abraded areas, and apply galvanizing repair paint specified below to comply with ASTM A 780.
 - 1. Galvanizing Repair Paint: High-zinc-dust-content paint for regalvanizing welds in galvanized steel, with dry film containing not less than 94 percent zinc dust by weight, and complying with DOD-P-21035 or SSPC-Paint 20.
- B. Factory Priming for Field-Painted Finish: Where field painting after installation is indicated, apply air-dried primer specified below immediately after cleaning and pretreatment.
 - 1. Shop Primer: Zinc-dust, zinc-oxide primer paint complying with performance requirements of FS TT-P-641, Type II.

2.7 STEEL SHEET FINISHES

- A. Surface Preparation: Solvent-clean surfaces to comply with SSPC-SP 1 to remove dirt, oil, grease, and other contaminants that could impair paint bond. Remove mill scale and rust, if present, from uncoated steel to comply with SSPC-SP 5 (White Metal Blast Cleaning) or SSPC-SP 8 (Pickling).
- B. Pretreatment: Immediately after surface preparation, apply a conversion coating of type suited to organic coating applied over it.
- C. Factory Priming for Field-Painted Finish: Apply shop primer that complies with ANSI A224.1 acceptance criteria, is compatible with finish paint systems indicated, and has capability to provide a sound foundation for field-applied topcoats. Apply primer immediately after surface preparation and pretreatment.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. General: Install steel doors, frames, and accessories according to Shop Drawings, manufacturer's data, and as specified.
- B. Placing Frames: Comply with provisions of SDI 105, unless otherwise indicated. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is completed, remove temporary braces and spreaders, leaving surfaces smooth and undamaged.
 - 1. Except for frames located in existing concrete, masonry, or gypsum board assembly construction, place frames before constructing enclosing walls and ceilings.
 - 2. In masonry construction, install at least 3 wall anchors per jamb adjacent to hinge location on hinge jamb and at corresponding heights on strike jamb. Acceptable anchors include masonry wire anchors and masonry T-shaped anchors.
 - 3. At existing concrete or masonry construction, install at least 3 completed opening anchors per jamb adjacent to hinge location on hinge jamb and at corresponding heights on strike jamb. Set frames and secure to adjacent construction with bolts and masonry anchorage devices.
 - 4. In metal-stud partitions, install at least 3 wall anchors per jamb at hinge and strike levels. In steel-stud partitions, attach wall anchors to studs with screws.
 - 5. In in-place gypsum board partitions, install knockdown, slip-on, drywall frames.
 - 6. Install fire-rated frames according to NFPA 80.
- C. Door Installation: Fit hollow-metal doors accurately in frames, within clearances specified in ANSI/SDI 100.

3.2 ADJUSTING AND CLEANING

- A. Prime Coat Touchup: Immediately after erection, sand smooth any rusted or damaged areas of prime coat and apply touchup of compatible air-drying primer.
- B. Protection Removal: Immediately before final inspection, remove protective wrappings from doors and frames.

END OF SECTION

FLUSH WOOD DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Solid-core doors with wood-veneer faces.
 - 2. Factory finishing flush wood doors.
 - 3. Factory fitting flush wood doors to frames and factory machining for hardware.
- B. Related Sections include the following:
 - 1. Division 8 Section "Door Hardware" for door hardware.
 - 2. Division 8 Section "Glazing" for glass view panels in flush wood doors.

1.3 SUBMITTALS

- A. Product Data: For each type of door. Include details of core and edge construction, trim for openings, and louvers.
 - 1. Include factory-finishing specifications.
- B. Shop Drawings: Indicate location, size and hand of each door; elevation of each kind of door; construction details not covered in Product Data; location and extent of hardware blocking; and other pertinent data.
 - 1. Indicate dimensions and locations of mortises and holes for hardware.
 - 2. Indicate dimensions and locations of cutouts.
 - 3. Indicate requirements for veneer matching.
 - 4. Indicate finish requirements.
 - 5. Indicate fire ratings for fire doors.
- C. Samples for Initial Selection: Color charts consisting of actual materials in small sections for the following:
 - 1. Faces of factory-finished doors with transparent finish. Show the full range of colors available for stained finishes.

1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain flush wood doors through one source from a single manufacturer.
- B. Quality Standard: Comply with the following standard:
 - 1. NWWDA Quality Standard: NWWDA I.S.1-A, "Architectural Wood Flush Doors"
 - 2. AWI Quality Standard: AWI's "Architectural Woodwork Quality Standards" for grade of door, core, construction, finish, and other requirements.
- C. Fire-Rate Wood Doors: Door complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to NFPA 252.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Protect doors during transit, storage, and handling to prevent damage, soiling, and deterioration. Comply with requirements of referenced standard and manufacturer's written instructions.
 - 1. Individually package doors in cardboard cartons and wrap bundles of doors in plastic sheeting.
- B. Mark each door with individual opening numbers used on Shop Drawings. Use removable tags or concealed markings.

1.6 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install doors until conditions for temperature and relative humidity have been stabilized and will be maintained in storage and installation areas during the remainder of the construction period to comply with requirements of the referenced quality standard.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Flush Wood Doors:
 - a) Algoma Hardwoods Inc.
 - b) Eggers Industries; Architectural Door Division.
 - c) Louisiana Pacific Corp.
 - d) Morgan Manufacturing
 - e) Weyerhaeuser Co.

2.2 DOOR CONSTRUCTION, GENERAL

- A. Doors for Transparent Finish: Comply with the following requirements:
1. Grade: Premium (Grade A faces).
 2. Faces: Match existing door hardwood species and finish
 3. Match between Veneer Leaves: Match existing door hardwood species and finish

2.3 SOLID-CORE DOORS

- A. Particleboard Cores: Comply with the following requirements:
1. Particleboard: ANSI A208.1, Grade LD-1.
 2. Particleboard: ANSI A208.1, Grade LD-2.
 3. Blocking: Provide wood blocking at particleboard-core doors as follows:
 - a) 5-inch top-rail blocking, at doors indicated to have closers.
 - b) 5-inch bottom-rail blocking, at exterior doors and doors indicated to have kick, mop, or armor plates.
 - c) 5-inch midrail blocking, at doors indicated to have exit devices.
- B. Interior Veneer-Faced Doors: Comply with the following requirements:
1. Core: Particleboard core.
 2. Construction: Five plies with stiles and rails bonded to core, and then entire unit abrasive planed before veneering.
- C. Fire-Rated Doors: Comply with the following requirements:
1. Construction: Construction and core specified above for type of face indicated or manufacturer's standard mineral-core construction as required to provide fire rating indicated.
 2. Blocking: For mineral-core doors, provide composite blocking with improved screw-holding capability approved for use in doors of fire ratings indicated and as follows:
 - a) 5-inch top-rail blocking.
 - b) 5-inch bottom-rail blocking, at doors indicated to have kick, mop, or armor plates.
 - c) 4- ½ by 10 inch lock blocks.
 - d) 5-inch midrail blocking, at doors indicated to have exit devices.
 3. Edge Construction: At hinge stiles, provide manufacturer's standard laminated-edge construction with improved screw-holding capability and split resistance and with outer stile matching face veneer.

2.4 LIGHT FRAMES

- A. Wood Frames for Light Openings: As follows:
1. Wood Species: Same species as door faces.
 2. Profile: Recessed tapered beads.

3. Profile: Manufacturer's standard shape.
 4. Frames for Openings in Fire Doors: Wood frames and metal glazing clips approved for use in 20-minute fire-rated wood-core doors.
- B. Wood-Veneered Beads for Light Openings in Fire Doors: Manufacturer's standard wood-veneered noncombustible beads matching veneer species of door faces and approved for use in doors of fire rating indicated. Include concealed metal glazing clips where required for opening size and fire rating indicated.

2.5 **FABRICATION**

- A. Factory fit doors to suit frame-opening sizes indicated, with the following uniform clearances and bevels, unless otherwise indicated:
1. Clearances: Provide 1/8 inch at heads, jambs, and between pairs of doors. Provide 1/8 inch from bottom of door to top of decorative floor finish or covering. Where threshold is shown or scheduled, provide 1/4 inch from bottom of door to top of threshold.
 - a) Comply with NFPA 80 for fire-rated doors.
 2. Bevel fire-rated doors 1/8 inch in 2 inches on lock edge; trim stiles and rails only to extent permitted by labeling agency.
- B. Factory machine doors for hardware that is not surface applied. Locate hardware to comply with DHI-WDHS-3. Comply with final hardware schedules, door frame Shop Drawings, DHI A115-W series standards, and hardware templates.
1. Coordinate measurements of hardware mortises in metal frames to verify dimensions and alignment before factory machining.
 2. Metal Astragals: Premachine astragals and formed-steel edges for hardware for pairs of fire-rated doors.
- C. Openings: Cut and trim openings through doors to comply with applicable requirements of Referenced standards for kind(s) of door(s) required.
1. Light Openings: Trim openings with moldings of material and profile indicated.

2.6 **FACTORY FINISHING**

- A. General: Comply with referenced quality standard's requirements for factory finishing.
- B. Finish wood doors at factory.
- C. Transparent Finish: Comply with requirements indicated for grade, finish system, staining effect, and sheen.
1. Grade: Premium.
 2. Finish: AWI System TR-2 catalyzed lacquer.
 3. Finish: Manufacturer's standard finish with performance requirements comparable to AWI System TR-6 catalyzed polyurethane.

4. Staining: Match EXISTING DOORS
5. Effect: Filled finish.
6. Sheen: Clear Satin.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine installed door frames before hanging doors.
 1. Verify that frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with plumb jambs and level heads.
 2. Reject doors with defects.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Hardware: For installation, see Division 8 Section "Door Hardware."
- B. Manufacturer's Written Instructions: Install wood doors to comply with manufacturer's written instructions, referenced quality standard, and as indicated.
 1. Install fire-rated doors in corresponding fire-rated frames according to NFPA 80.
- C. Factory-Fitted Doors: Align in frames for uniform clearance at each edge.
- D. Factory-Finished Doors: Restore finish before installation, if fitting or machining is Required at Project site.

3.3 ADJUSTING AND PROTECTING

- A. Operation: Rehang or replace doors that do not swing or operate freely.
- B. Finished Doors: Refinish or replace doors damaged during installation.
- C. Protect doors as recommended by door manufacturer to ensure that wood doors are without damage or deterioration at the time of Substantial Completion.

END OF SECTION

ALUMINUM ENTRANCES

PART 1 GENERAL

1.01 DESCRIPTION OF WORK

- A. Furnish and install aluminum entrance, entrance door frames complete with hardware, and related components as shown on the drawings and specified in this section.
- B. All doors shall be EFCO Series D500 Wide Stile Entrance Door. Other manufacturers requesting approval to bid their product as an equal must submit the following information fifteen days prior to close of bidding.
 - 1. A sample door (size and configuration) as per requirements of architect.
 - 2. Test reports documenting compliance with requirements of Section 1.05.
- C. Glass and Glazing:
 - 1. Reference Section 08800 for Glass and Glazing.
- D. Single Source Requirement
 - 1. All products listed in Section 1.02 shall be by the same manufacturer.

1.02 RELATED WORK

- A. Section 08480 - Balanced Door Assemblies

1.04 ITEMS INSTALLED BUT NOT FURNISHED

- A. Structural support of the framing, wood framing, structural steel, and final cleaning.

1.05 TESTING AND PERFORMANCE REQUIREMENTS

- A. Test Units
 - 1. Air test unit shall be minimum size of 3'-0" x 7'-0".
- B. Test Procedures and Performances
 - 1. Entrance doors shall conform to all requirements for the door type referenced in 1.01.B. In addition, the following specific performance requirements shall be met.
 - 2. Air Infiltration Test
 - a. With door closed and locked, test unit in accordance with ASTM E 283 at a static air pressure difference of 1.57 psf.
 - b. Air infiltration shall not exceed .50 cfm per foot of perimeter crack length for single doors.

1.06 QUALITY ASSURANCE

- A. Provide test reports from AAMA accredited laboratories certifying the performance as specified in 1.05.
- B. Test reports shall be accompanied by the entrance door manufacturer's letter of certification stating that the tested door meets or exceeds the referenced criteria for the appropriate ANSI/AAMA door type.

1.08 SUBMITTALS

- A. Contractor shall submit shop drawings, finish samples, test reports, and warranties.
 - 1. Samples of materials as may be requested without cost to owner, i.e., metal, glass, fasteners, anchors, frame sections, mullion section, corner section, etc.

1.09 DELIVERY< STORAGE AND HANDLING

- A. Deliver, store and handle materials to job site in manufacturer's or distributors packaging undamaged, complete with installation instructions.

1.10 WARRANTIES

- A. Total Entrance Door System
 - 1. The responsible contractor shall assume full responsibility and warrant for one year the satisfactory performance of the total door installation which includes that of the manufacturer supplied doors, hardware, glass (including insulated units), glazing, anchorage and setting system, sealing, flashing, etc., as it relates to air, and structural adequacy as called for in the specifications and approved shop drawings.
 - 2. Any deficiencies due to such elements not meeting the specifications shall be corrected by the responsible contractor at his expense during the warranty period.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Aluminum
 - 1. Extruded aluminum shall be 6063T5 or T6 alloy and temper.
- B. Fasteners
 - 1. All exposed fasteners shall be aluminum or stainless steel.
- C. Glass
 - 1. Glass is to be 1" insulated tempered glass units utilizing warm edge technology as

manufactured by EFCO Corporation, a licensee under PPG Industries patents covering the Intercept™ IG unit and consist of () at exterior, () air spacer and () interior.

- a. Air spacer is to be continuous, one piece, tin plated steel U channel.
2. Desiccated butyl is to be extruded onto inside web of U channel, full perimeter.

Intercept™ is a trademark of PPG Industries.

2.02 FABRICATION

A. General

1. Major portions of the door sections shall have .125" wall thickness. Glazing stop sections shall have .050" wall thickness.

B. Entrance Doors

1. Door stiles shall be no less than 5" wide. (Not including glass stops.)
2. Door stiles and rails shall have hairline joints at corners. Heavy concealed reinforcement brackets shall be secured with screws and shall be deep penetration and fillet welded.
3. All doors shall have an adjusting mechanism in the top rail to provide for minor clearance adjustments.
4. Weather-stripping shall be wool pile and shall be installed in one stile of pairs of doors and in jamb stiles of center pivoted doors.

C. Door stops shall include wool pile weather-stripping.

D. Glazing

1. All units shall be dry glazed with extruded pressure fitting aluminum glazing stops, and E. P. D. M. gasket.

2.03 FINISH

A. Organic

1. Finish all exposed areas of aluminum entrance doors and components with clear anodized finish

2.04 HARDWARE

A. Hardware for Aluminum Entrances shall be furnished and installed in the doors by the door manufacturer, and shall include the following EFCO standard hardware.

1. All doors shall have standard hardware furnished by the door manufacturer..
 - a. Hinging shall be butt hinges
 - b. Locks shall be dead bolt
 - c. Flush bolts.
 - d. Closers shall be surface mounted
 - e. Panic devices shall be mid-panel device

- f. Push-Pull Hardware shall be Ultraline "wire" push-pull.Thresholds
- g. Miscellaneous Hardware Items (give description)

PART 3 EXECUTION

3.01 INSPECTION

A. Job Conditions

- 1. Verify that openings are dimensionally within allowable tolerances, plumb, level, clean, provide a solid anchoring surface and are in accordance with approved shop drawings.

3.02 INSTALLATION

- A. Use only skilled tradesmen with work done in accordance with approved shop drawings and specifications.
- B. Plumb and align entrance door faces in a single plane for each wall plane and erect doors and materials square and true. Adequately anchor to maintain positions permanently when subjected to normal thermal movement, specified building movement, and specified wind loads.
- C. Adjust doors for proper operation after installation.
- D. Furnish and apply sealants to provide a weather tight installation at all joints and intersections and at opening perimeters. Wipe off excess material and leave all exposed surfaces and joints clean and smooth.

3.04 PROTECTION AND CLEANING

- A. After completion of entrance installation, entrance doors shall be inspected, adjusted, put into working order and left clean, free of labels, dirt, etc. Protection from this point shall be the responsibility of the general contractor.

END OF SECTION

SECTION 087100

DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of contract, including General and Supplementary General Conditions and Division-1 Specification sections, apply to work of this section.

1.2 SUMMARY

- A. This Section includes items known commercially as finish or door hardware that are required for swing, sliding, and folding doors, except special types of unique hardware specified in the same Sections as the doors and door frames on which they are installed. Furnish and deliver all door hardware necessary for all doors, also hardware as specified herein and as enumerated in hardware sets and as indicated and required by actual conditions at the building. The hardware shall include the furnishing of all necessary screws, bolts, expansion shields, drop plates, and all other devices necessary for the proper application of the hardware:

B. ALL DOOR HARDWARE MUST BE FURNISHED BY SECTION 087100 DOOR HARDWARE SUPPLIER.

"CONTRACTS, including Door Hardware, ISSUED TO ALUMINUM DOOR SUPPLIER" must stipulate aluminum door hardware must be purchased from SECTION 087100 HARDWARE SUPPLIER.

- C. **Hardware Supplier:** Must employ an experienced **Architectural Hardware Consultant (AHC)** who is available to Owner, Architect, and Contractor, at reasonable times during the course of the Work, for consultation.

D. Related Sections:

- | | | | |
|----|--------------------|----------|--|
| 1. | Division 8 Section | 08 06 00 | "SCHEDULE FOR OPENINGS". |
| 2. | Division 8 Section | 08 11 13 | "HOLLOW METAL DOORS AND FRAMES". |
| 3. | Division 8 Section | 08 14 16 | "FLUSH WOOD DOORS". |
| 4. | Division 8 Section | 08 41 13 | "ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS". |
| 5. | Division 8 Section | 08 71 13 | "AUTOMATIC DOOR OPERATORS" |
| 6. | Division 26 | | "ELECTRICAL". |
| 7. | Division 28 | | "ELECTRONIC SECURITY SYSTEMS". |

1.3 REFERENCES

A. Standards:

1. ANSI/BHMA, A156.1 (2013) - Butts & Hinges.
2. ANSI/BHMA, A156.2 (2011) - Bored and Preamsembled Locks and Latches.
3. ANSI/BHMA, A156.3 (2008) - Exit Devices.
4. ANSI/BHMA, A156.4 (2008) - Door Controls - Closers.

5. ANSI/BHMA, A156.5 (2010) - Auxiliary Locks and Associated Products.
6. ANSI/BHMA, A156.6 (2010) - Architectural Door Trim.
7. ANSI/BHMA, A156.7 (2009) - Template Hinge Dimensions.
8. ANSI/BHMA, A156.8 (2010) - Door Controls - Overhead Stops and Holders.
9. ANSI/BHMA, A156.13 (2012) - Mortise Locks & Latches, Series 1000.
10. ANSI/BHMA, A156.14 (2013) - Sliding and Folding Door Hardware.
11. ANSI/BHMA, A156.15 (2011) - Release Devices – Closer Holder, Electro Mag/Mech.
12. ANSI/BHMA, A156.16 (2008) - Auxiliary Hardware
13. ANSI/BHMA, A156.18 (2012) - Materials and Finishes.
14. ANSI/BHMA, A156.21 (2009) - American National Standard for Thresholds.
15. ANSI/BHMA, A156.22 (2012) - Door Gaskets and Edge Seal Systems.
16. ANSI/BHMA, A156.25 (2007) - Electrified Locking Devices.
17. ANSI/BHMA, A156.26 (2012) - Continuous Hinges.
18. ANSI/BHMA, A156.28 (2007) - Recommended Practices for Keying Systems.
19. ANSI/BHMA, A156.29 (2012) - American National Standard for Exit Locks & Alarms.
20. ANSI/BHMA, A156.30 (2003) - American National Standard for High Security Cylinders.
21. ANSI/BHMA, A156.36 (2010) - American National Standard for Auxiliary Locks.
22. ANSI/BHMA, A156.115 (2006) - Hardware Preparation in Steel Doors and Frames.
23. NFPA 80 - Fire Doors and Windows.
24. UL10C - Positive Pressure Fire Tests of Door Assemblies.
25. AIA 232 2009 - General Conditions of the Contract for Construction Manager as Risk Edition

B. Codes: (CT):

1. Applicable state and local building codes.
2. 2012 International Building Code as adopted by the State of Connecticut.
3. NFPA 101 - Life Safety code.
4. NFPA 105 - Smoke and Draft Control Door Assemblies.
5. ICC / ANSI A117.1 - Accessible and Usable Buildings and Facilities.
6. ADA - Americans with Disabilities Act.

C. UL Underwriters Laboratories:

1. UL 10C – Fire Tests of Door Assemblies.
2. UL 305 – Panic Hardware.

D. DHI – Door and Hardware Institute:

1. Sequence and Form and for the Hardware Schedule.
2. Recommended Locations for Builders Hardware.

1.4 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Section 1 Specification Sections:
- B. Product data including manufacturer's technical product data for each item of door hardware, installation instructions, maintenance of operating parts and finish of door hardware.
- C. Final hardware schedule must be coordinated with doors, frames, and related work to ensure proper size, thickness, hand function, and finish of door hardware. Conflicts between the SPECIFIED DOOR HARDWARE and the DOORS / FRAMES must be brought to the attention of the ARCHITECT prior to submitting HARDWARE SUBMITTAL to the ARCHITECT.
- D. HARDWARE SUPPLIER shall confirm specified LOCK FUNCTIONS with the OWNER at the KEYING MEETING.
 - 1. Final Hardware Schedule Content: Based on hardware indicated, organize schedule into "HARDWARE SETS" indicating complete designation of every item required for each door or opening. Include the following information. Type, style, function, size, and finish of each hardware item.
 - a. Name and manufacturer of each item.
 - b. Fastenings and other pertinent information.
 - c. Location of Hardware Set, cross-referenced to indication of Drawings both on floor plans, in door, and frame schedule.
 - d. Explanation of all abbreviations, symbols, and codes contained in schedule.
 - e. Mounting locations for hardware. Provide "DHI" Standard Mounting Locations in the Hardware Submittal.
 - f. Door and frame sizes and materials.
 - g. Keying information.
 - h. *Door handles, pulls, latches, locks and other operating devices shall be installed 34 inches (864 mm) minimum and 48 inches (1219 mm) maximum above the finish floor. Locks used only for security purposes and not used for normal operation are permitted at any height.*
 - 2. Submittal Sequence: submit final schedule at earliest possible date particularly where acceptance of hardware schedule must precede fabrication of other work that is critical in the Project construction schedule. Include with schedule the product data, samples, shop drawings of other work affected by door hardware, and other information essential to the coordinated review to schedule.
 - 3. Keying Schedule: After a keying meeting between representatives of the Owner, Architect, hardware supplier, and, if requested, the representative for the lock manufacturer, provide a keying schedule, listing the levels of keying, as well as an explanation of the key system's function, the key symbols used, and the door numbers controlled.
- E. Samples: If requested by Architect, submit samples of each type of exposed hardware unit in finish indicated and tagged with full description for coordination with schedule. Submit samples prior to submission of final hardware schedule:
 - 1. Samples will be returned to the supplier. Units that are acceptable and remain undamaged through submittal, review, and field comparison process may, after final check of operation, be incorporated in the Work, within limitations of keying coordination requirements.
- F. Templates for doors, frames, and other work specified to be factory prepared for the installation of door hardware. Check shop drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

- G. Wiring Diagrams: Upon final approval of the hardware schedule, submit wiring and riser diagrams as required for the complete and proper installation of all electrical, electromechanical, and electromagnetic products. Submittals must represent that coordination has occurred with the security system submittals and shop drawings. Also, that shop drawings submitted and schedules developed have been specifically reviewed and coordinated for both physical equipment fitment and power requirements with the security system contractor approved shop drawings.
- H. "Hardware Schedule and Templates", Hardware schedules shall be created which reference specifically to the specified lock voltages and separately indicating whether the door is a "fail safe" or "fail secure" electrified lock arrangement.
- I. Electrified Hardware: Electrified Hardware to be used for security purposes must be UL Listed for Burglary Applications.
- J. At the completion of hardware installation, and prior to issuance of certificate of occupancy, prepare and submit the hardware inspection report to include the following:
 - 1. Current and predictable problems of substantial nature in the performance of the hardware.
 - 2. Hardware has been installed and adjusted in accordance with manufacturer's recommendations and instructions.
- K. At the completion of the project, provide Owner with two (2) copies of an Operation and Maintenance Manual. This manual shall consist of a hard cover (3) ring binder with the project name listed on the front. Included will be:
 - 1. A final copy of the approved and as built hardware schedule.
 - 2. A final copy of the approved keying schedule.
 - 3. Catalog cuts for each item used in the project.
 - 4. Parts list and numbers for each item used.
 - 5. Maintenance instructions for all items.
 - 6. Name, address and phone number of local representatives for each item used.

1.5 QUALITY ASSURANCE

- A. Substitutions: Products are to be those specified to ensure a uniform basis of acceptable materials. Requests for substitutions must be made in accordance with Section 1 requirements. If proposing a substitute to a specified item, indicate basis for substitution and savings to be made. Provide sample if requested. Certain products have been selected for their unique characteristics and particular project suitability. All Hardware is "Basis-of-Design" product specification as defined in Section 08 71 00. Model numbers (and Manufacturer's) listed in "Hardware Set Schedule" are "Basis-of-Design".
 - 1. Items specified, as "no substitution" shall be provided exactly as listed.
 - 2. Items listed with no substitute manufacturers listed have been requested by the Owner or Architect to match existing for continuity and/or future performance and maintenance standards or because there is no known equal product.
 - 3. If no other products are listed in a category, then "no substitution" is implied.
- B. Supplier Qualifications: A recognized architectural door hardware supplier, with warehousing facilities in the Project's vicinity, that has a record of successful in-service performance for supplying door hardware similar in quantity, type, and quality to that indicated for this Project and that employs an experienced architectural hardware consultant (AHC) who is available to Owner, architect, and Contractor, at reasonable times during the course of the Work, for consultation.

1. Require supplier to meet with Owner to finalize keying requirements and to obtain final instructions in writing.
- C. A pre-installation meeting shall be held to instruct installers on the proper installation and adjustment of door hardware. A representative of each major hardware category, including, but not limited to, Locks, Exit Devices, & Closers, shall instruct the installers on the correct installation of their products. The manufacturers of the Door Hardware provided on this project shall certify to the Architect that the door hardware installer for this project has been trained in the proper installation procedures and is certified to install the door hardware.
- D. Fire-Rated Openings: Provide door hardware for fire-rated openings that complies with NFPA Standard No. 80 and requirements of authorities having jurisdiction. Provide only items of door hardware that are listed and are identical to products tested by UL, Intertek Testing Services, Warnock Hersey, Factory Mutual, or other testing and inspecting organization acceptable to authorities having jurisdiction for use on types and sizes of doors indicated in compliance with requirements of fire-rated door and door frame labels.
- E. Accessible Hardware: Door Hardware; *Handles, pulls, latches, locks and other operable parts on accessible doors shall have a shape that is easy to grasp with one hand and does not require tight grasping, pinching, or twisting of the wrist to operate. Such hardware shall 34 inches (865 mm) minimum and 48 inches (1220 mm) maximum above the floor or ground. Where sliding doors are in the fully open position, operating hardware shall be exposed and usable from both sides. EXCEPTION: Locks used only for security purposes and not used for normal operation are permitted in any location.*
- F. Accessible Hardware: Door-Opening Force; Fire Doors shall have the minimum opening force allowable by the appropriate administrative authority. The maximum force for pushing open or pulling open doors other than fire doors shall be as follows:
 1. Interior hinged door: 5.0 pounds.
 2. Sliding or folding door: 5.0 pounds.
 3. Fire Doors: Minimum opening force allowable by authorities having jurisdiction, but not greater than 10 lbf. *These forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door in a closed position. The maximum force required to release the latch shall not exceed 15 lbf.*
 4. Bevel raised thresholds with a slope of not more than 1:2. Provide thresholds not more than 1/2 inch high.
 5. Adjust door closer sweep periods so that, from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches from the latch, measured to the leading edge of the door.

1.6 PRODUCT HANDLING

- A. Tag each item or package separately with identification related to final hardware schedule and include basic installation instructions with each item or package.
- B. Each item of hardware shall be individually packaged in manufacturer's original container.
- C. Receiving and storing of door hardware is responsibility of supplier. Prior to delivery of door hardware to the project, Hardware Supplier must sort and clearly mark with appropriate hardware set number to match set numbers of approved hardware schedule. Two or more identical sets may be packed in same container.
- D. Inventory door hardware jointly with representatives of hardware supplier and hardware installer until each is satisfied that count is correct.

- E. Deliver individually packaged door hardware items promptly to place of installation (shop or Project site).
- F. Provide secure lock-up for door hardware delivered to the Project, but not yet installed. Control handling and installation of hardware items that are not immediately replaceable so that completion of the Work will not be delayed by hardware losses both before and after installation.

1.7 MAINTENANCE

- A. Maintenance Tools and Instructions: Furnish two (2) complete sets of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware. Furnish two (2) extra screws or fasteners of each type size and of the same finish used in this project.

1.8 WARRANTY

- A. Provide manufacturer's warranties as follows:
 - 1. Closers: As specified in Section 017830 "Warranties and Bonds".
 - 2. Exit Devices: As specified in Section 017830 "Warranties and Bonds".
 - 3. Hinges: As specified in Section 017830 "Warranties and Bonds".
 - 4. Continuous Hinges: As specified in Section 017830 "Warranties and Bonds".
 - 5. All other hardware: As specified in Section 017830 "Warranties and Bonds".
- B. Starting date for all warranty periods to be date of substantial completion of the Project.
- C. No liability is to be assumed where damage or faulty operation is due to improper installation, improper use, or abuse.
- D. Products judged to be defective during the warranty period shall be replaced or repaired in accordance with the manufacturer's warranty, at no additional cost to the Owner.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following.
 - 1. Butts and Hinges:
 - a. Hager Companies.
 - b. Bommer.
 - c. Ives, Allegion.
 - d. PBB World Class Hinges.
 - e. Stanley Hardware.
 - 2. Continuous Hinges:
 - a. Hager Companies.
 - b. Bommer.
 - c. Ives, Allegion.
 - d. PBB World Class Hinges.
 - e. Pemko
 - f. Select
 - 3. Key Control System:

- a. HPC.
- b. Lund, Inc.
- c. Telkee, Inc.
- 4. Cylinders and Locks:
 - a. Best Access Systems, Div of Stanley Security Solutions, "45H", "9k" Series.
 - b. Corbin-Russwin, Div of Assa Abloy, "ML2000", "CL3300" Series.
 - c. DORMA Architectural Hardware, "ML9000", "CL800" Series.
 - d. Sargent, Div of Assa Abloy "8200", "10-Line" Series.
 - e. Schlage Lock, Allegion, "L", "ND" Series.
 - f. PDQ Manufacturing – MR Series
- 5. Flush Bolts:
 - a. Hager Companies.
 - b. Glynn Johnson, Allegion.
 - c. Ives, Allegion.
 - d. Rockwood Manufacturing.
 - e. Trimco Triangle Brass.
- 6. Exit/Panic Devices (provide U.L. label at rated doors):
 - a. DORMA Architectural Hardware "9000" Series.
 - b. Corbin/Russwin, Div of Assa Abloy, "5000" Series.
 - c. Sargent, Div of Assa Abloy, "80" Series.
 - d. Von Duprin, Allegion, "98/99" Series
 - e. PDQ Manufacturing – 6200 Series
- 7. Push/Pull Units:
 - a. Hager Companies.
 - b. Burns Manufacturing, Inc
 - c. Ives, Allegion.
 - d. Rockwood Manufacturing
- 8. Overhead Surface Closers:
 - a. DORMA Architectural Hardware "8900" Series.
 - b. LCN, Allegion. "4000 (Heavy Duty Arms)" Series.
 - c. Norton, Div of Assa Abloy. "PR7500/PR7700" Series.
 - d. Sargent, Div of Assa Abloy, Inc., "351 (Heavy Duty Arms)" Series.
 - e. PDQ Manufacturing – 7100 Series
- 9. Door Control Devices:
 - a. DORMA Architectural Hardware.
 - b. Burns Manufacturing, Inc.
 - c. Glynn Johnson, Allegion.
 - d. MAG Security.
 - e. Rixson, Div of Assa Abloy.
 - f. Sargent, Div of Assa Abloy.
- 10. Kick and Mop Plates:
 - a. Hager Companies.
 - b. Burns Manufacturing, Inc.
 - c. Ives, Allegion.

- d. Rockwood.
- 11. Weather-stripping and Seals:
 - a. Hager Companies.
 - b. National Guard Products.
 - c. Pemko Manufacturing Co., Inc.
 - d. Reese Enterprises, Inc.
- 12. Thresholds:
 - a. Hager Companies.
 - b. National Guard Products.
 - c. Pemko Manufacturing Co., Inc.
 - d. Reese Enterprises, Inc.
- 13. Smoke and Sound Stripping:
 - a. Hager Companies.
 - b. Bommer.
 - c. Ives, Allegion.
 - d. PBB World Class Hinges.
 - e. Stanley Hardware.
- 14. Astragals:
 - a. Hager Companies.
 - b. National Guard Products.
 - c. Pemko Manufacturing Co., Inc.
 - d. Reese Enterprises, Inc.
- 15. Door Stops:
 - a. Hager Companies.
 - b. Burns Manufacturing, Inc
 - c. Glynn Johnson, Allegion
 - d. Ives, Allegion.
 - e. Rockwood Manufacturing.
- 16. Electrified Hinges:
 - a. Hager Companies.
 - b. Bommer.
 - c. PBB World Class Hinges.
 - d. Stanley Hardware.
- 17. Electrified Power Transfers:
 - a. DORMA Architectural Hardware.
 - b. Locknetics, Allegion.
 - c. Security Door Controls.
 - d. Securitron, Div of Assa Abloy.
 - e. Von-Duprin, Allegion.

2.2 SCHEDULED HARDWARE

- A. Requirements for each type of door hardware are indicated on the "Door Schedule", and in the Schedule at the end of this Section. Products are identified by using hardware designation numbers of the following:

1. **Manufacturer's Product Designations:** The product designation and name of one manufacturer are listed for each hardware type required for the purpose of establishing minimum requirements. Manufacturer and model numbers indicated in Hardware Sets constitute a "Basis-of-Design" product specification as defined in this Section.

2.3 MATERIALS AND FABRICATION

- A. **Manufacturer's Name Plate:** Do not use manufacturers' products that have manufacturer's name or trade name displayed in a visible location (omit removable nameplates) except in conjunction with required fire-rated labels and as otherwise acceptable to Architect.
 1. Manufacturer's identification will be permitted on rim of lock cylinders only.
- B. **Base Metals:** Product hardware units of basic metal and forming methods indicated, using manufacturer's standard metal alloy, composition, temper, and hardness, but in no case of lesser (commercially recognized), quality than specified for applicable hardware units by applicable ANSI/BHMA A156 series standards for each type of hardware item and with ANSI/BHMA A156.18 for finish designations indicated. Do not furnish "optional" materials or forming methods for those indicated, except as otherwise specified.
- C. **Fasteners:** Provide hardware manufactured to conform to published templates generally prepared for machine screw installation. Do not provide hardware that has been prepared for self-tapping sheet metal screws, except as specifically indicated.
- D. **Furnish screws for installation with each hardware item.** Provide Phillips flat-head screws except as otherwise indicated. Finish exposed (exposed under any condition) screws to match hardware finish or, if exposed in surfaces of other work, to match finish of this other work as closely as possible including "prepared for paint" surfaces to receive paint.
- E. **Provide concealed fasteners.** Provide tamper resistant fasteners when they cannot be concealed. Fasteners shall be of the same finish as the balance of the hardware. Where thru-bolts are used as a means of reinforcing the work, provide sleeves for each thru-bolt or use sex screw fasteners.

2.4 HINGES, BUTTS, AND CONTINUOUS HINGES

- A. **Templates:** Except for hinges and pivots to be installed entirely (both leaves) into wood doors and frames, provide only template-produced units.
- B. **Screws:** Provide Phillips flat-head screws complying with the following requirements:
 1. For metal doors and frames install machine screws into drilled and tapped holes.
 2. For wood doors and frames install wood screws.
 3. For fire-rated wood doors install #12 x ¼ inch, threaded-to-the-head steel wood screws.
 4. Finish screw heads to match surface of hinges or pivots.
- C. **Hinge Pins:** Except as otherwise indicated, provide hinge pins as follows:
 1. Out-Swing Exterior Doors: Non-removable pins.
 2. Interior Doors: Non-rising pins.
 3. All "Card Reader Doors": Non-removable pins.
- D. **Number of Hinges:** Provide number of hinges indicated but not less than 3 hinges per door leaf for doors 90 inches of additional height:
 1. **Fire-Rated Doors:** Not less than 3 hinges per door leaf for doors 86 inches or less in height with same rule for additional hinges.
- E. **Size and weight of butts:**

1. See Hardware Sets for Details.
- F. Power Transfer Hinges:
 1. Power transfer hinges may be EPT or ETW types. Armored cable may be used only where EPT or ETW electrified hinges are not practical.
 2. Furnish all power transfer hinges as 12 conductor units.

2.5 LOCK CYLINDERS AND KEYING

- A. Review the keying system with the Owner and provide the type required grandmaster or great-grandmaster, integrated with Owner's existing "BEST" system.
- B. HARDWARE SUPPLIER SHALL CONFIRM SPECIFIED LOCK FUNCTIONS WITH OWNER AT THE KEYING MEETING.
- C. Equip locks with manufacturer's 6-pin tumbler "interchangeable core" cylinder employing "RESTRICTED KEYWAY". Such cylinders have cores that are removable by the use of a special "control key". Deliver hardware to the contractor with temporary cores installed and keyed alike. Permanent cores are to be mastered keyed as directed by the owner. Deliver permanent cores and keys to the owner when notified by the owner in writing. Temporary cores and keys are to be returned to the hardware supplier by the contractor within 10 days of their replacement by permanent cores. (Do Not Provide Extra Key Blanks if Restricted Keyway has been specified.)
 1. Furnish 12 each "Temporary Change Keys" and 2 each "Temporary Core Control Keys".
 2. Key Quantity: Furnish 3 change keys for each lock, 5 master keys for each master system, and 5 grandmaster keys for each grandmaster system. Furnish 6 each "Core Control Keys".
 3. Furnish 12 Temporary Change Keys and 2 Temporary Core Control Keys.
 4. Furnish 12 each additional core for owner's stock.
 5. Install "FINAL CORES" when instructed by Owner.
 6. Deliver keys to Owner.
- D. Metals: Construct lock cylinder parts from brass or bronze, stainless steel, or nickel silver.
- E. Comply with Owner's instructions for master keying and, except as otherwise indicated, provide individual change key for each lock that is not designated to be keyed alike with a group of related locks.
- F. Key Material: Provide keys of nickel silver only.
- G. Final cores to be installed by the hardware supplier, installer must verify that all cylinders are working correctly.

2.6 KEY CONTROL SYSTEM

- A. Provide a key control system including envelopes, labels, tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet, all as recommended by system manufacturer, with capacity for 150 percent of the number of "Key Sets" required for the Project:
 1. Provide flat lip strikes for locks with 3 pieces, anti-friction latchbolt as recommended by manufacturer.

2.7 LOCKS, LATCHES, AND BOLTS

- A. Strikes: Provide manufacturer's standard wrought box strike for each latch or lock bolt, with curved lip extended to protect frame, finished to match hardware set, unless otherwise indicated:

1. Provide complete cross-index system set up by key control manufacturer, and place keys on markers and hooks in the cabinet as determined by the final key schedule.
 2. Provide hinged-panel type cabinet for wall mounting.
- B. Accessibility Requirements: Where handles, pulls, latches, locks, and other operating devices are indicated to comply with accessibility requirements, comply with the 2010 ADA Standards, ICC/ANSI A117.1.
1. Comply with the following maximum opening-force requirements:
 - a. Interior, Non-Fire-Rated Hinged Doors: 5 lbf applied perpendicular to door.
 - b. Folding Doors: 5 lbf applied parallel to door at latch.
 - c. Fire Doors: Minimum opening force allowable by authorities having jurisdiction, but not greater than 10 lbf.
 2. Comply with the following maximum closing speed requirements:
 - a. Adjust closers so that from an open position of 90 degrees, the time required to move the door to an open position of 12 degrees is to be 5 seconds minimum.
 - b. Adjust closers so that from an open position of 70 degrees, the time required to move the door to an open position of 3 inches from the latch is to be 3 seconds minimum.
- C. Mortise Locks:
1. Mortise locks shall be certified as ANSI A156.13, Series 1000, Operational and Security Grade 1, and meets A117.1 Accessibility Code, and shall be manufactured from heavy gauge steel, containing components of steel with zinc dichromate plating for corrosion resistance. Lock case shall be multi-function and field reversible for handling.
 2. Locks are to have a standard 2-3/4" backset with a full 3/4" throw 2-piece stainless steel mechanical anti-friction latch-bolt.

Lever trim shall be solid brass, bronze, or stainless steel, cast or forged in the design specified, with wrought roses and external Security requirement. Levers shall be thru-bolted to assure proper alignment, and shall have a 2-piece spindle. Lever trim on the secure side of doors serving rooms considered by the authority having jurisdiction to be hazardous shall have a tactile warning.
 3. Provide electrical options as scheduled.
 - a. All Openings scheduled to receive Electrified Hardware must include a Quick Connect Wiring Harness and Raceway in all Doors.
 - b. "Request to Exit", Electrified Lockset shall be provided with one internal SPDT switch which monitors the Lever Trim, as called for on the security system drawings.
 - c. "Latch bolt Monitoring", Electrified Lockset shall be provided with one internal SPDT switch which monitors the Lock Latch, as called for on the security system drawings.
 - d. Lock Power Supplies: It is imperative that the security contractor and hardware supplier coordinate the lock voltage requirements, fail safe/fail secure requirements, lock in-rush current requirements, whether locks are continuous duty or not and any other related issues. Power supplies to be furnished by Door Hardware Suppliers and installed by the Security or Electrical Contractor. Locate power supplies and battery backup in the access control mechanical space when wire run lengths permit. Where wire runs exceed manufacturer's written recommendations, coordinate the installation location with Construction Manager / General Contractor and Architect

- e. Local Audible Alarms shall be furnished and installed by the Security Contractor.
- f. Power transfer hinges may be "EPT" or "ETW" types. Armored cable may be used only where "EPT" or "ETW" electrified hinges are not practical.
- g. Furnish all power transfer hinges as 12 conductor units.

D. Exit Devices:

- 1. Exit devices shall be touchpad type, fabricated of brass, bronze, stainless steel, or aluminum, plated.
- 2. Touchpad shall extend a minimum of one half of the door width. End-cap shall be flush mounted, and will have two-point attachment to door. Nylon bearings and stainless steel springs shall be used for long life and durability; compression or torsion springs will be used in devices, latches, and outside trims or controls.
- 3. Where panic and fire exit hardware is installed, panic and fire exit hardware shall meet CSFSC 1010.1.9.9 and 1010.1.10: (2) *A maximum unlatching force of 15 pounds.*
- 4. All devices to incorporate a security dead latching feature.
- 5. Mechanism case shall sit flush on the face of all flush doors, or spacers shall be furnished to fill gaps behind devices. Where glass trims or moldings projects off the face of the door, provide glass bead kits.
- 6. All non-fire-rated exit devices shall have cylinder dogging, unless noted otherwise in Hardware Sets.
- 7. Removable mullions shall be a steel tube, except at aluminum entrances, mullions to be aluminum. Where scheduled, mullion shall be of a type that can be removed by use of a keyed cylinder, which is self-locking when re-installed.
- 8. Where lever handles are specified as outside trim for exit devices, provide heavy-duty lever trims with forged or cast escutcheon plates. Where scheduled, provide vandal-resistant levers that can easily be re-setting. Lever style will match the lever style of the locksets. Lever handles shall meet A117.1 Accessibility Code.
- 9. Where notation for knurling appears on door schedule, provide knurled outside lever.
- 10. Exit devices shall be UL listed panic exit hardware. All exit devices for fire rated openings shall be UL labeled fire exit hardware.
- 11. Furnish and Install "THRU BOLTS" on Aluminum, Hollow Metal, and Wood Doors.
- 12. Provide electrical options as scheduled.
 - a. All Openings scheduled to receive Electrified Hardware must include a Quick Connect Wiring Harness and Raceway in all Doors.
 - b. "Latch bolt Monitoring", Electrified Panic Hardware shall be provided with one internal SPDT switch which monitors the latch bolt, as called for on the security system drawings.
 - c. Lock Power Supplies: It is imperative that the security contractor and hardware supplier coordinate the lock voltage requirements, fail safe/fail secure requirements, lock in-rush current requirements, whether locks are continuous duty or not and any other related issues. Power supplies to be furnished by Door Hardware Suppliers and installed by the Security or Electrical Contractor. Locate power supplies and battery backup in the access control mechanical space when wire run lengths permit. Where wire runs exceed manufacturer's written recommendations, coordinate the installation location with Construction Manager / General Contractor and Architect

- d. Power transfer hinges may be "EPT" or "ETW" types. Armored cable may be used only where "EPT" or "ETW" electrified hinges are not practical.
- e. Furnish all power transfer hinges as 12 conductor units.

2.8 CLOSERS AND DOOR CONTROL DEVICES

- A. Size of Units: Except as otherwise specifically indicated, comply with the manufacturer's recommendations for size of door control unit depending on size of door, exposure to weather, and anticipated frequency of use:
 - 1. Where parallel arms are indicated for closers, provide closer with Heavy Duty Arm.
 - 2. Provide parallel arms for all overhead closers, except as otherwise indicated. Provide parallel arms for all overhead closers, except as otherwise indicated.
 - 3. Closers must operate at 180 degree opening where indicated on plans and door schedule.
 - 4. Provide all necessary Drop Plate Brackets, Shims, and Angle Brackets, where required to complete installation of closers on doors and frames.
 - 5. Furnish and Install "THRU BOLTS" on Aluminum, Hollow Metal, and Wood Doors.
- B. Access-Free Manual Closers: Where manual closers are indicated for doors required to be accessible to the physically handicapped, provide adjustable units complying with ANSI A117.1 provisions for door opening force and closing speed.
- C. Combination Door Closers and Holders: Where indicated, provide units designed to hold door in open position under normal usage and to release and close door automatically under normal usage and to release and close door automatically under fire conditions. Incorporate and integral electromagnetic holder mechanism designed for use with UL listed fire detectors, provided with normally closed switching contacts.
- D. Coordinators: Provide Door Coordinators where required, including Parallel Arm Brackets. Verify bracket configuration with frame profile for each opening requiring door coordinator.
- E. Magnetic Holders: Provide wall- or floor-mounted electromagnetic door release with a minimum of 25 pounds of holding force. Projection of holder and armature must be coordinated with other hardware and wall conditions to ensure that door sits parallel to wall when fully open. Where magnetic holders are used on fire-rated doors, they must be wired into the fire control panel for fail-safe operation.

2.9 DOOR STOPS AND HOLDERS

- A. It shall be the responsibility of the hardware supplier to provide door stops for all doors in accordance with the following requirements. Provide Door Stops as indicated in Hardware Sets.

2.10 DOOR TRIM UNITS

- A. Fasteners: Provide manufacturer's standard exposed fasteners for door trim units consisting of either machine screws or self-tapping screws.
- B. Fabricate protection plates not more than 2 inches less than door width on push side of door and by height indicated.
 - 1. Metal Plates: Stainless steel, 0.050 inch (U.S. 18 gage).
 - 2. Provide UL Rated "KICK / ARMOR" Plates where detailed on UL Rated Openings.

2.11 THRESHOLDS, WEATHER-STRIPPING, SOUND STRIPPING AND SEALS

- A. Match items to the manufacturer's standard color and texture finish for the latch and lock sets (or push-pull units if not latch or lock sets).

2.12 MISCELLANEOUS HARDWARE

- A. Furnish four (4) extra screws or fasteners of each type, used for the hinges, door closers, holders and protective plates of the same finish used in this project.
- B. Furnish two (2) additional adjusting wrenches for the door closers.

2.13 HARDWARE FINISHES

- A. Match items to the manufacturer's standard color and texture finish for the latch and lock sets (or push-pull units if not latch or lock sets).
- B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware.
- C. The designations used in schedules and elsewhere to indicate hardware finishes are those listed in ANSI/BHMA A156.18, "Materials and Finishes", including coordination with the traditional U.S. finishes show by certain manufacturers for their products.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to installation of any hardware, examine all doors, frames, walls and related items for conditions that would prevent proper installation of door hardware. Correct all defects prior to proceeding with installation.

3.2 INSTALLATION

- A. All hardware to be installed by qualified tradesmen, skilled in the application of commercial grade hardware. For technical assistance if necessary, installers may contact the manufacturer's rep for the item in question.
- B. Furnish and Install "THRU BOLTS" on Hollow Metal and Wood Doors.
- C. Electronic hardware shall be furnished and installed by qualified tradesmen, but shall be wired by the security system contractor. Door Hardware installer shall be present to complete final adjustments to door hardware, when security contractor completes electrical terminations.
- D. Mount hardware units at heights indicated in "Recommended Locations for Builders Hardware for Standard Steel Doors and Frames" by the Door and Hardware Institute.
- E. Install each hardware item in compliance with the manufacturer's instructions and recommendations, using only the fasteners provided by the manufacturer.
- F. Do not install surface mounted items until finishes have been completed on the substrate. Protect all installed hardware during painting.
- G. Set units' level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.
- H. All operating parts shall move freely and smoothly without binding, sticking, or excessive clearance.

3.3 ADJUSTING, CLEANING, AND DEMONSTRATING

- A. Adjust and check each operating item of hardware and each door, to insure proper operation or function of every unit. Replace units, which cannot be adjusted to operate freely and smoothly.
- B. Where door hardware is installed more than one month prior to acceptance or occupancy of a space or area, return to the installation during the week prior to acceptance or occupancy to

perform a final check and adjustment of all hardware items in such space or area. Clean operating doors. Adjust door control devices to compensate for final operation of heating and ventilating equipment.

- C. Clean adjacent surfaces soiled by hardware installation.
- D. At the completion of "BALANCING" of all "AIR HANDLING SYSTEMS", prior to owner taking occupancy, 'Hardware Installer" will re-adjust all closer closing and latching cycles.
- E. **Approximately six months after the Date of Substantial Completion, the installer shall perform the following:**
 - 1. **Examine and readjust each item of door hardware as necessary to ensure function of doors, door hardware, and electrified hardware.**
 - 2. **Consult with and instruct owners' personnel on recommend maintenance procedures.**
 - 3. **Replace door hardware items that have deteriorated or failed due to faulty design, materials, or installation of door hardware units.**

3.4 FIELD QUALITY CONTROL

- A. Prior to Substantial Completion, the installer, accompanied by representatives of the manufacturers of latchsets and locksets, door closers, and exit devices, and of other major hardware suppliers, shall perform the following work.
- B. Examine (by representatives of the manufacturers) and re-adjust (by hardware installer) each item of door hardware as necessary to restore function of doors and hardware to comply with specified requirements.
- C. Consult with and instruct Owner's personnel in recommended additions to the maintenance procedures.
- D. Replace hardware items that have deteriorated or failed due to faulty design or materials (work to be performed by representatives of the manufacturers including removal and reinstallation).
- E. Replace hardware items that have deteriorated or failed due to incorrect installation (work to be performed by hardware installer including removal and reinstallation) of hardware units.
- F. Prepare a written report of current and predictable problems of substantial nature in the performance of the hardware.

3.5 PROTECTION

- A. Provide for the proper protection of all items of hardware until the Owner accepts the project as complete. Damaged or disfigured hardware shall be replaced or repaired by the responsible party.

3.6 HARDWARE SCHEDULE

- A. General: Provide hardware for each door to comply with requirements of this Section, Door and Hardware Schedule Section 08 06 00", and the following Hardware Sets. The door hardware sets listed herein shall not be considered as a complete hardware schedule and shall only be considered as an indication of the hardware requirements desired by the Owner. It shall be this Contractor's responsibility to visit the site, examine the drawings and door schedule and provide all necessary hardware as shown. Such items shall be of same quality, quantity and type as that scheduled for similar doors or parts of the building used for similar purposes.
- B. **Door and Hardware Schedule Section 08 06 00, "BULLETS", "SCHEDULE GENERAL NOTES" and "OPENING NOTES" shall be considered part of Section 08 71 00.**

- C. As part of the submittal process, the Contractor and/or Door, Frame, and Hardware Suppliers must inspect all existing doors and frames to confirm that the new hardware will work with existing conditions, and if necessary, Door, Frame, and Hardware Suppliers shall advise the contractor of modifications that must be made to existing doors and frames to accommodate new hardware. The Contractor is responsible for making all such modifications.
- D. Conflicts between the SPECIFIED DOOR HARDWARE and the DOORS / FRAMES must be brought to the attention of the ARCHITECT prior to submitting HARDWARE SUBMITTAL to the ARCHITECT.

MAIN ENTRANCE SECURITY RENOVATIONS
WHITING LANE ELEMENTARY SCHOOL
47 WHITING LANE
WEST HARTFORD, CONNECTICUT

DOOR
HARDWARE

Division 1
Section 087100

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Hardware Set 002

1	Hinge, Continuous Geared	780 - 112 HD - 83" - CLEAR - Concealed Leaf	Roton
1	Hinge, Continuous Geared	780 - 112 HD - 83" - CLEAR - Concealed Leaf - RETW-QC (12-Wire) - RHR	Roton
1	Mortar Box	430	Hager
1	Exit Device, Rim	ED5200 - EO - 630 - RHR - D200 - M52 (CD) - M91 - M92 - M94	Corbin-Russwin
1	Exit Device, Rim_Key	ED5200 - K157 - 630 - LHR - D200 - M52 (CD)	Corbin-Russwin
1	Door Harness	Door Harness with "QC" Connectors to match Door Hardware	McKinney
2	Cylinder, Mortise - Dogging	Cylinder - Mortise - 626 (Dogging)	Section 087100
1	Cylinder, Mortise	Cylinder - Mortise - 626 (Removeable Mullion)	Section 087100
1	Cylinder, Rim	Cylinder - Rim - 626	Section 087100
1	Mullion, Removable_Key	L980A - 628 - w/ All Necessary Mtg Bkts - 84"	Sargent
2	Pull, Offset	BF158 - 12" Pull CTC - Mtg Type "1" x US32D	Rockwood
1	Auto Door Opener/Closer	Auto Door Opener/Closer & Push Plates - RHR Leaf	Section 087113
1	Closer, Overhead Parallel Arm	CPS-7500 - 689 (At 90 Degrees) - LHR LEAF	Norton
1	Door Contact	Door Contact	By Others
1	Power Supply	Power Supply by 087100 - See Heading 001	Securitron
1	Diagrams	Diagrams - Elevation and Riser	By MFR
1	Diagrams	Diagrams - Point To Point	By MFR

Hardware Set 003

1	Hinge, Continuous Geared	780 - 112 HD - 83" - CLEAR - Concealed Leaf - RETW-QC (12-Wire)	Roton
1	Electrically Unlocked	ML20906 x SEC - NSA - 626 - M17 - M91 - M92 - 24 Volt AC/DC	Corbin-Russwin
1	Door Harness	Door Harness with "QC" Connectors to match Door Hardware	McKinney
1	Closer, Overhead Parallel Arm	CLP-7500 - 689 (HD / Stop Arm to 90 Degrees) (Install "PUSH" Side)	Norton
1	Power Supply	BPS-24-4 (24VDC @ 4 Amps), (Provide Necessary Relays)	Securitron
1	Door Contact	Door Contact	By Others

Hardware Set 301

3	Hinge, Ball Bearing	BB1279 - 4.5 x 4.5 - US26D	Hager
1	Lockset, Entrance/Office	ML2051 - NSA - 626 - M17	Corbin-Russwin
1	Stop, Wall	409 - US26D	Rockwood
3	Silencer, HM Dr. Frame	608 - Gray	Rockwood

Hardware Set 402

3	Hinge, Ball Bearing	BB1279 - 4.5 x 4.5 - US26D	Hager
1	Lockset, Storeroom/Closet	ML2057 - NSA - 626 - M17	Corbin-Russwin
1	Closer, Overhead Regular Arm	7500 - 689	Norton
1	Kick Plate	K1050 - 08" x 30" - 18 ga. - US32D	Rockwood
1	Stop, Wall	409 - US26D	Rockwood
3	Silencer, HM Dr. Frame	608 - Gray	Rockwood

END OF SECTION

MAIN ENTRANCE SECURITY RENOVATIONS
WHITING LANE ELEMENTARY SCHOOL
47 WHITING LANE
WEST HARTFORD, CONNECTICUT 06119

SCHEDULE GENERAL NOTES

CONSTRUCTION MANAGER / GENERAL CONTRACTOR:

"NO EXCEPTIONS"

ALL DOOR HARDWARE MUST BE FURNISHED BY SECTION 087100 DOOR HARDWARE SUPPLIER.
"CONTRACTS, Including Door Hardware, ISSUED TO ALUMINUM DOOR SUPPLIER" must stipulate aluminum door hardware must
be purchased from SECTION 087100 HARDWARE SUPPLIER.

"NO EXCEPTIONS"

CONSTRUCTION MANAGER / GENERAL CONTRACTOR / HARDWARE SUPPLIER:

MAIN ENTRANCE SECURITY RENOVATIONS
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47 WHITING LANE
WEST HARTFORD, CONNECTICUT 06119

OPENINGS SCHEDULE																							
OPENING NUMBER	SHEET NUMBER	DOOR										FRAME				FIRE RATING	FIRE CODE	ACCESSIBILITY REQUIREMENTS	ELECTRICAL / SECURITY	HARDWARE SET NO.	NEW WORK	BULLETIN - REVISION NUMBER	
		ACTIVE LEAF	DOUBLE DOOR LEAF	SINGLE DOOR LEAF	HEIGHT	THICKNESS	HANDING	DEGREE OF SWING REQUIRED	DOOR MATERIAL	FRAME MATERIAL	HEAD DETAIL	JAMB DETAIL	SILL / THRESHOLD DETAIL	SOUND DOOR AND GASKETING	U. L. RATING (IN MINUTES)								GASKETS AND SMOKE SEALS

Shall coordinate an inspection, with all manufacturer's representatives to confirm that all hardware has been installed and adjusted properly;
See "Specification Section - 08 71 00 - 3.2 - INSTALLATION

HARDWARE SUPPLIER:

Must employ an experienced Architectural Hardware Consultant (AHC) who is available to Owner, Architect, and Contractor, at reasonable times during the course of the Work, for consultation.

CONFLICTS between the SPECIFIED DOOR HARDWARE and the DOORS / FRAMES must be brought to the attention of the ARCHITECT prior to submitting HARDWARE SUBMITTAL to the ARCHITECT.

HARDWARE SUPPLIER must schedule a pre - installation meeting to instruct installers on proper installation and adjustment of the Locks, Exit Devices, and Closers. A manufacturers' representative of each major hardware category shall be present to complete the instructions, and then certify to the Architect that the door hardware installer has been trained in the proper installation procedures and is certified to install the finish hardware.

DOOR HARDWARE INSTALLATION: All door hardware shall be installed according to manufactures' instructions.
This includes following the template required to complete the intended operation of the door hardware, and all fastener holes required shall be drilled and tapped to the correct size as detailed in the template. Template Hardware Installation so that Door will be able to swing a Minimum of 90 degrees. Doors swinging less than 90 Degrees will be reinstalled to meet ADA requirements.

All "DOOR HARDWARE FASTENERS" used during installation must be original hardware manufacturer's supplied fasteners.
The use of drywall screws or non "OEM" self tapping screws will be rejected, reinstallation of hardware will be required.
Fastener holes in doors and frames from the use of improper hardware fasteners will not be acceptable, doors and frames will be replaced at no cost to the owner.

HARDWARE SUPPLIER shall confirm specified LOCK FUNCTIONS with the OWNER at the KEYING MEETING.

CONTINUOUS HINGES on ALUMINUM DOORS

Verify with Aluminum Door Supplier Hinge Model Selections for compatibility with Aluminum Head and Jamb Profiles.

All "LOCKS" shall be of the same Manufacturer.

All "EXIT DEVICES" shall be of the same Manufacturer.

DOOR SCHEDULE

MAIN ENTRANCE SECURITY RENOVATIONS
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OPENINGS SCHEDULE																					
OPENING NUMBER	SHEET NUMBER	SINGLE DOOR LEAF	DOUBLE DOOR LEAF	ACTIVE LEAF	ACTIVE LEAF (PRH & PP Hardware)	IN - ACTIVE LEAF	HEIGHT	THICKNESS	HANDING	DEGREE OF SWING REQUIRED	DOOR MATERIAL	FRAME				FIRE RATING	FIRE CODE	ACCESSIBILITY REQUIREMENTS	HARDWARE SET NO.	NEW WORK	BULLETIN - REVISION NUMBER
												FRAME MATERIAL	HEAD DETAIL	JAMB DETAIL	SILL / THRESHOLD DETAIL						

All "DOOR CLOSERS" shall be of the same Manufacturer unless specified as no substitution.
(Provide All Necessary Hardware To Complete Installation of Closers on Aluminum and Hollow Metal Frames)

All Aluminum Sills to be continuous, exterior Sills set in Sealant Typical.

Exterior HM Frames and Doors shall be Galvanized and Insulated.

Provide Blocking in walls for all Door Hardware (i.e., but not limited to: Door Closers, Wall & Overhead Stops)

Provide Blocking for Door Closers in Wood Doors (USE THRU BOLTS WHEN INSTALLING DOOR CLOSERS)

HARDWARE / ELECTRICAL / SECURITY

CONDUIT & WIRING:

- 1. Install all conduits where required for electrified door hardware prior to applying in Grouting Solid or Spray Foam Solid in Door Frame.
- 2. All Conduits required for Power and Control Wiring, and Power Wiring, to be furnished and installed by Electrical Contractor.
- 3. All Low Voltage Access Control Wiring and Terminations are furnished and installed by the Access Control Contractor.
- 4. Controls and Control Wiring (provide 16 ga. Wire unless noted otherwise) of Electrified Devices, Transfer Hinges, and Power Supplies to be provided by Security Contractor.

DOOR & FRAMES:

- 1. Door Frame Supplier must coordinate Door Contact Frame Prep with Security Contractor.
- 2. Door and Frame Suppliers must prep doors and frames to accommodate all electrified hardware, including all required conduits in doors and frames, when prepping doors and frames for door hardware.

HARDWARE:

- 1. Hardware supplier must provide, Wiring Diagrams - Elevation and Riser & Point to Point, to Electrical Contractor.
- 2. Electromagnetic Door Release (Magnetic Door Holders) to be furnished by Section 08 71 00 and Installed by Electrical Contractor.

DOOR SCHEDULE

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OPENINGS SCHEDULE																		
OPENING NUMBER	SHEET NUMBER	SINGLE DOOR LEAF	DOUBLE DOOR LEAF	ACTIVE LEAF	ACTIVE LEAF (PRH & PP Hardware)	IN - ACTIVE LEAF	HEIGHT	THICKNESS	HANDING	DEGREE OF SWING REQUIRED	DOOR MATERIAL	FRAME				FIRE RATING	FIRE CODE	ACCESSIBILITY REQUIREMENTS
												FRAME MATERIAL	HEAD DETAIL	JAMB DETAIL	SILL / THRESHOLD DETAIL			
																U. L. RATING (IN MINUTES)	GASKETS AND SMOKE SEALS	PANIC RELEASE HARDWARE
																POSITIVE LATCHING	AUTOMATIC CLOSING	PUSH / PULL (Interior Openings)
																"U" HANDLE / LEVER HANDLE	MOP, KICK, & ARMOR PLATES	TACTILE WARNING
																ACCESSIBLE THRESHOLD	ELECTRICAL / SECURITY	HARDWARE SET NO.
																		NEW WORK
																		BULLETIN - REVISION NUMBER

ACCESS CONTROL READERS:

1. "READERS" by Access Control / Security Contractor.

OPENING NOTES

GENERAL DOOR NOTES:
"A" All Doors Exiting 50 or More Persons shall have Panic Hardware.
"B" All Door Hardware shall be Accessible to Persons with Disabilities. Hardware shall comply with ADA Standards.
"C" Closers shall open a minimum of 175 Degrees, where 180 Degree swing is shown as such on Floor Plans and Door Schedule.
"D" Where (*) occurs in the "DEGREE OF SWING REQUIREMENTS" column, refer to the "OPENING NOTES" column for swing requirements at each leaf.
"E" Where (*) occurs in the "HEAD", "JAMB", or "SILL" detail column, refer to the "OPENING NOTES" column for "DETAILS".
"F" Provide UL Rated KICK / ARMOR PLATES where detailed on UL Rated Openings.
"G" Refer to Mechanical Series Drawing for all "Door Undercuts"

AC

ACCESS CONTROLLED OPENINGS: Opening hardware will include some form of mechanical or electrical access control.
"AC" by "READER"
"AC / AC" by "READER / READER"
"AC" / Kp" by "READER / KEYPAD"

MAIN ENTRANCE SECURITY RENOVATIONS
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OPENINGS SCHEDULE																					
OPENING NUMBER	SHEET NUMBER	SINGLE DOOR LEAF	DOUBLE DOOR LEAF	ACTIVE LEAF	ACTIVE LEAF (PRH & PP Hardware)	IN - ACTIVE LEAF	HEIGHT	THICKNESS	HANDING	DEGREE OF SWING REQUIRED	DOOR MATERIAL	FRAME				FIRE RATING	FIRE CODE	ACCESSIBILITY REQUIREMENTS	HARDWARE SET NO.	NEW WORK	BULLETIN - REVISION NUMBER
												FRAME MATERIAL	HEAD DETAIL	JAMB DETAIL	SILL / THRESHOLD DETAIL						

"ALUMINUM DOOR HARDWARE"
"EXTERIOR" - Minimum of 2" Thick Doors, coordinate with manufacture.
"INTERIOR" - 1-3/4" Thick Doors
All door hardware with the exception of "Perimeter Weatherstripping and Meeting Styles" shall be Supplied by "SECTION 08 71 00". (NO EXCEPTIONS).

ALL DOOR HARDWARE MUST BE FIELD installer BY TRAINED DOOR HARDWARE installers. (NO EXCEPTIONS).

Aluminum Door Hardware shall not be furnished to the Aluminum Door Manufacturer for installation by Door Manufacturer. Weatherstripping, Door Bottoms, and Meeting Styles shall be Supplied and installer by the Aluminum Door Supplier.
Aluminum Door Supplied must verify with Section 08 71 00 for compatibility with the Aluminum Door & Frame profiles. Changes required to Complete the installation will be Completed at no additional charge to the Owner.
Aluminum Door Manufacturer must provide sufficient Reinforcing for all door hardware, and not limited to; Hinges, Locks, Exit Devices, Closers, and Door Pulls.
Provide All necessary Auxiliary Hardware required to Complete the door Closer installation including but not limited to Drop Plate Brackets, OEM Fasteners, etc.
Where "SMOKE GASKETS" are specified, Section 08 71.00 shall provide and install.
Where "ELECTRICAL Terminations" are required, Manufacturers' Representative will be present during electrical terminations.

Manufacturers' Representative will instruct installers or will make any final adjustments required to Complete the smooth operation of the Door(s) Hardware.

AOR "AO" AUTO OPERATOR - "RHR LEAF" ONLY: Stanley Technology Magic Force Auto Swing Operator, surface mounted, clear anodized finish. Provide Micro Processor, Control Logic, Electro Mechanical Power Open / Spring Close Drive. Provide (2) Push Plate Activation, 120 Volt Wiring and Cut Off Switch. Installation and Terminations of all controls is by STANLEY.

CL01 Provide Parallel Arm Closer with Integral Heavy Duty Stop Arm.

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OPENINGS SCHEDULE																						
OPENING NUMBER	SHEET NUMBER	SINGLE DOOR LEAF	DOUBLE DOOR LEAF	ACTIVE LEAF	ACTIVE LEAF (PRH & PP Hardware)	IN - ACTIVE LEAF	HEIGHT	THICKNESS	HANDING	DEGREE OF SWING REQUIRED	DOOR MATERIAL	FRAME				FIRE RATING	FIRE CODE	ACCESSIBILITY REQUIREMENTS	ELECTRICAL / SECURITY	HARDWARE SET NO.	NEW WORK	BULLETIN - REVISION NUMBER
												FRAME MATERIAL	HEAD DETAIL	JAMB DETAIL	SILL / THRESHOLD DETAIL							

CL02 Provide Parallel Arm Closer with Integral Heavy Duty Stop Arm, (Install "PUSH SIDE" of Door).

EU.06.4PU

"EU06.4PL" MORTISE LOCK
"ELECTRICALLY CONTROLLED TRIM" - "FAIL SECURE operation"
"LATCHBOLT MONITOR"
"REQUEST TO EXIT SWITCH"
"CARD Reader" installer on the PUSH Side of the Opening.

System to have "FAIL SECURE operation" :
Section 08 71 00 to provide Electrically Locked Trim, provide Integral Latchbolt Monitor and Request to Exit Function.
Section 08 71 00 to provide (10 RETW) Wire Power Transfer Hinge, and Power Supply (See Hardware Sets for PS Requirements).

Latchbolt by Grip out side only when lock is energized.
Outside Grip locked when lock is not energized.
Latchbolt by key outside when lock is not energized.
Auxiliary latch deadlocks Latchbolt
Inside Grip always FREE.

PR.EV.MLR 1

"PR.EV.MLR 1"
Electric Motorized Latch Retraction ("RHR" Leaf Only) Panic Release Hardware.
Bolt Monitor (Latch) Monitor, Touchbar Monitor Switch (Request to Exit Function), and Trim Monitor Switch' (RHR LEAF).
Section 08 71 00 to provide TWO(1) each (EPT) Wire Power Transfer Hinge, and Power Supply (See Hardware Sets for PS Requirements).

PS2

"PS2" POWER SUPPLIES, SHARED , ELECTRIFIED TRIM & LOCKS:
See Heading 001

SW1

"SW1" DEGREE SWING (90) - Template Hardware (Door Closers / Overhead Stops) Installation to Specified Degree of Swing (90), See Door Schedule.

DOOR SCHEDULE

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OPENINGS SCHEDULE																												
OPENING NUMBER	SHEET NUMBER	DOOR										FRAME				FIRE RATING	FIRE CODE				ACCESSIBILITY REQUIREMENTS	ELECTRICAL / SECURITY	HARDWARE SET NO.	NEW WORK	BULLETIN - REVISION NUMBER			
		ACTIVE LEAF	ACTIVE LEAF (PRH & PP Hardware)	IN - ACTIVE LEAF	HEIGHT	THICKNESS	HANDING	DEGREE OF SWING REQUIRED	DOOR MATERIAL	FRAME MATERIAL	HEAD DETAIL	JAMB DETAIL	SILL / THRESHOLD DETAIL	SOUND DOOR AND GASKETING	U. L. RATING (IN MINUTES)		GASKETS AND SMOKE SEALS	PANIC RELEASE HARDWARE	POSITIVE LATCHING	AUTOMATIC CLOSING						ELECT. MAG. DOOR RELEASE	PUSH / PULL (Interior Openings)	"U" HANDLE / LEVER HANDLE
SW2																												
"SW2" DEGREE SWING (110 - 120) - Template Hardware (Door Closers / Overhead Stops) Installation to Specified Degree of Swing (110 - 120), See Door Schedule.																												
SW3																												
"SW3" DEGREE SWING (180) - Door must be able to swing 180 degrees. Template Hardware installation for 180 Degree swing operation. (175 Degrees where limited by field conditions or hardware specified)																												

POWER DOOR OPERATORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following types of power door operators:
1. Exterior and interior, power door operators, low energy, with visible mounting.
 2. Automatic door operators shall be configured for doors as follows:
 - a. Simultaneous pairs, out swing, in swing, or double egress.
 - b. Simultaneous pairs, with single operator, out swing or in swing.
 - c. Single doors, out swing or in swing.
- B. Related Sections:
1. Division 8 Section "Aluminum-Framed Entrances and Storefronts" for entrances furnished separately in Division 8 Section.
 2. Division 8 Section "Door Hardware" for hardware to the extent not specified in this Section.
 3. Division 16 Sections for electrical connections including conduit and wiring for power door operators.

1.3 REFERENCES

General: Standards listed by reference, including revisions by issuing authority, form a part of this specification section to extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority abbreviation and standard designation.

- A. Underwriters Laboratories (UL):
1. UL 325 – Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems.
 2. American National Standards Institute (ANSI)/Builders' Hardware Manufacturers Association (BHMA):
 3. ANSI/BHMA A156.19: Standard for Power Assist and Low Energy Power Operated Doors.
- B. American Society for Testing and Materials (ASTM):
1. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
 2. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate
- C. Builders' Hardware Manufacturers Association (BHMA):
1. BHMA A156.10 - Standard for Power Operated Pedestrian Doors.
- D. American Association of Automatic Door Manufacturers (AAADM):
- E. National Fire Protection Association (NFPA):
1. NFPA 101 – Life Safety Code.

2. NFPA 70 – National Electric Code.

- F. International Conference of Building Officials (ICBO):
 - 1. UBC 1997: Uniform Building Code
- G. California Department of Forestry and Fire Protection, Office of the State Fire Marshall.
- H. International Standards Organization (ISO):
 - 1. ISO 9001 - Standard for Manufacturing Quality Management Systems
- I. National Association of Architectural Metal Manufacturers (NAAMM):
 - 1. Metal Finishes Manual for Architectural and Metal Products.
- J. American Architectural Manufacturers Association (AAMA):
 - 1. AAMA 607.1 - Clear Anodic Finishes for Architectural Aluminum.
 - 2. AAMA 611 Voluntary Specification for Anodized Architectural Aluminum.

1.4 DEFINITIONS

- A. Activation Device: Device that, when actuated, sends an electrical signal to the door operator to open the door.

1.5 PERFORMANCE REQUIREMENTS

- A. Provide power door operators capable of withstanding structural loads and thermal movements based on testing manufacturer's standard units in assemblies similar to those indicated for this Project.
- B. Operating Range: Minus 30 deg F (29 deg C) to 130 deg F (54 deg C).
- C. Opening-Force Requirements for Egress Doors: In the event power failure to the operator, swinging automatic entrance doors shall open with a manual force, not to exceed 30 lbf (133 N) applied at 1" (25 mm) from the latch edge of the door.
- D. Break Away Requirements: Power door operators provided with a breakaway device shall require no more than 50 lbf (222 N) applied at 1" (25 mm) from the latch edge of the door.
- E. Door Energy: The kinetic energy of a door in motion shall not exceed 1.25 lbd-ft (1.69 Nm).
- F. Closing Time:
 - 1. Doors shall be field adjusted to close from 90 degrees to 10 degrees in 3 seconds or longer.
 - 2. Doors shall be field adjusted to close from 10 degrees to fully closed in not less than 1.5 seconds.

1.6 SUBMITTALS

- A. Submit listed submittals in accordance with Conditions of the Contract and Division 01 submittal procedures.
- B. Shop Drawings: Include plans, elevations, sections, details, hardware mounting heights, and attachments to other work. Indicate wiring for electrical supply.
- C. Color Samples for selection of factory-applied color finishes.

- D. Closeout Submittals: Provide the following with project close-out documents.
1. Owner's Manual.
 2. Warranties.

1.7 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained for installation and maintenance of units required for this Project.
- B. Manufacturer Qualifications: A qualified manufacturer with a manufacturing facility certified under ISO 9001 and with company certificate issued by AAADM.
- C. Certifications: Power door operators shall be certified by the manufacturer to meet performance design criteria in accordance with the following standards:
1. ANSI A156.10.
 2. NFPA 101.
 3. UL 325 Listed (Fire Door Operator)
 4. ICBO (UBC Standard 10-1).
 5. California Department of Forestry and Fire Protection, Listed.
- E. Source Limitations: Obtain power door operators through one source from a single manufacturer.
- F. Product Options: Drawings indicate sizes, profiles, and dimensional requirements of automatic entrance door assemblies and are based on the specific system indicated. Refer to Division 1 Section "Product Requirements."
- G. Power Operated Door Standard: ANSI/BHMA A156.19.
- H. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- I. Emergency-Exit Door Requirements: Comply with requirements of authorities having jurisdiction for swinging automatic entrance doors serving as a required means of egress.

1.8 PROJECT CONDITIONS

- A. Field Measurements: General Contractor shall verify openings to receive power door operators by field measurements before fabrication and indicate measurements on Shop Drawings.
- B. Mounting Surfaces: General Contractor shall verify all surfaces to be plumb, straight and secure; substrates to be of proper dimension and material.
- C. Other trades: General Contractor Advise of any inadequate conditions or equipment.

1.9 COORDINATION

- A. Templates: Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing power door operators to comply with indicated requirements.
- B. Electrical System Roughing-in: Coordinate layout and installation of power door operators with connections to power supplies.

- C. System Integration: Integrate power door operators with other systems as required for a complete working installation.
 - 1. Provide electrical interface control capability for card reader or keypad operation of power door operators on doors with electric locking.
 - 2. Where required for proper operation, provide a time delay relay to signal power door operator to activate only after electric lock system is released.

1.10 WARRANTY

- B. Power door operators shall be free of defects in material and workmanship for a period of one (1) year from the date of substantial completion.
- C. During the warranty period the Owner shall engage a factory-trained technician to perform service and affect repairs. A safety inspection shall be performed after each adjustment or repair and a completed inspection form shall be submitted to the Owner.
- D. During the warranty period all warranty work, including but not limited to emergency service, shall be performed during normal working hours.

PART 2 PRODUCTS

2.1 POWER DOOR OPERATORS

- A. Manufacturer: Stanley Access Technologies; Magic-Access™ Series power door operator.

2.2 MATERIALS

- A. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated.
 - 1. Headers: 6063-T6.
 - 2. Extruded Bars, Rods, Profiles, and Tubes: ASTM B 221.
 - 3. Sheet and Plate: ASTM B 209.
- B. Sealants and Joint Fillers: Refer to Division 7 Section "Joint Sealants".

2.3 COMPONENTS

- A. Header Case: Header case shall not exceed 6-1/8 inch x 4 inch (156 mm x 102 mm) in rectangular section and shall be fabricated from extruded aluminum with structurally integrated end caps, designed to conceal door operators and controls. The operator shall be sealed against dust, dirt, and corrosion within the header case. Access to the operator and electronic control box shall be provided by a full-length removable cover, edge rabbetted to the header to ensure a flush fit. Removable cover shall be secured to prevent unauthorized access.
- B. Door Arms and Linkage Assembly: A combination of door arms and linkage shall provide positive control of door through entire swing; units shall permit use of butt hung, center pivot, and offset pivot-hung doors.
- C. Fasteners and Accessories: Manufacturer's standard corrosion-resistant, non-staining, non-bleeding fasteners and accessories compatible with adjacent materials.
- D. Signage: Provide signage in accordance with ANSI/BHMA A156.19.

2.4 SWINGING DOOR OPERATORS

- A. Provide door operators of size recommended by manufacturer for door size, weight, and movement; for condition of exposure; and for long-term, maintenance-free operation under normal traffic load for type of occupancy indicated.
- B. Operators: Self-contained units powered by a minimum fractional horsepower, permanent-magnet AC or DC motors.
 - 1. Electro-mechanical Operator: Transmit power from operator to door through reduction gear train, splined spindle, door arm, and linkage assembly. Drive train shall have positive constant engagement.
 - 2. Operation: Power opening and spring closing.
 - 3. Mounting: Visible
 - 4. Features:
 - a. Adjustable opening, open check, and closing speeds.
 - b. Adjustable opening force.
 - c. Adjustable hold-open time between 0 and 30 seconds.
 - d. Reverse on obstruction.
- C. Closing Operation: The operator shall close the door by spring energy employing the motor, as a dynamic brake to provide closing speed control. The closing spring shall be adjustable for positive closing action at a low material stress level for long spring life.
- D. Manual Use: The operator shall function as a manual door closer in the direction of swing with or without electrical power. The operator shall deliver an even, consistent open force across the entire transition from door fully closed to door fully open.
- E. Electrical service to door operators shall be provided under Division 16 Electrical. Minimum service to be 120 VAC, 10 amps for doors with operators in pairs, 5 amps for single doors.

2.5 ELECTRICAL CONTROLS

- A. Electrical Control System: Electrical control system shall include a solid state controller with quick connect plugs.
- B. Controller Protection: The controller shall incorporate the following features to ensure trouble free operation:
 - 1. Fuse Protection
 - 2. Electronic Surge Protection
 - 3. Internal Power Supply Protection.
- C. Program Dip Switches: The controller shall have program dip switches to allow selection or change at the following parameters: carpet or timer logic, single or dual door, and activation options.

2.6 ACTIVATION DEVICES

- A. Push Plates: Provide 4 ½ inch (114 mm) square SPDT push plates with UL listed switch. Face plates and mounting studs shall be stainless steel. Face plates shall be engraved with the international symbol for accessibility and "Push To Open".
 - 1. Interior and exterior push plates shall be wall mounted in single or double gang electrical boxes and hardwired to door operator controls.

2.7 ALUMINUM FINISHES

- A. Comply with NAAMM Metal Finishes Manual for Architectural and Metal Products for

recommendations for applying and designing finishes. Finish designations prefixed by AA comply with system established by Aluminum Association for designing finishes.

- B. Class II, Clear Anodic Finish: AA-M10C22A31 Mechanical Finish: as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class II, clear coating 0.40 mils minimum complying with AAMA 611-98, and the following:
 - 1. AAMA 607.1
 - 2. Applicator must be fully compliant with all applicable environmental regulations and permits, including wastewater and heavy metal discharge.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances, header support, and other conditions affecting performance of swinging automatic entrance doors. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Do not install damaged components. Fit joints to produce hairline joints free of burrs and distortion. Rigidly secure non-movement joints.
- B. Mounting: Install power door operators/headers plumb and true in alignment with established lines and grades. Anchor securely in place.
 - 1. Install surface-mounted hardware using concealed fasteners to greatest extent possible.
 - 2. Set headers, arms and linkages level and true to location with anchorage for permanent support.
- C. Door Operators: Connect door operators to electrical power distribution system as specified in Division 16 Sections.
- D. Sealants: Comply with requirements specified in Division 7 Section "Joint Sealants" to provide weather tight installation.

3.3 FIELD QUALITY CONTROL

- A. Testing Services: Factory Trained Installer shall test and inspect each swinging automatic entrance door to determine compliance of installed systems with applicable ANSI standards.

3.4 ADJUSTING

- A. Adjust door operators, controls, and hardware for smooth and safe operation, for weather-tight closure, and complying with requirements in ANSI A156.19 by AAADM Certified Technician.

3.5 CLEANING AND PROTECTION

- A. Clean surfaces promptly after installation. Remove excess sealant compounds, dirt, and other substances. Repair damaged finish to match original finish.

END OF SECTION

GLAZING

PART – 1 GENERAL

1.1 RELATED DOCUMENTS:

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to work of this Section.

1.2 SUMMARY:

- A. This Section includes glazing for the following products, including those specified in other Sections where glazing requirements are specified by reference to this Section:

1. Window units.
2. Vision lites.
3. Entrances and other doors.

1.3 DEFINITIONS:

- A. Manufacturer is used in this Section to refer to a firm that produces primary glass or fabricated glass as defined in the referenced glazing standard.
- B. Deterioration of Insulating Glass: Failure of the hermetic seal under normal use due to causes other than glass breakage and improper practices for maintaining, and cleaning insulating glass. Evidence of failure is the obstruction of vision by dust, moisture, or film on the interior surfaces of glass. Improper practices for maintaining and cleaning glass do not comply with the manufacturer's directions.

1.4 SYSTEM PERFORMANCE REQUIREMENTS:

- A. General: Provide glazing systems that are produced, fabricated, and installed to withstand normal thermal movement, wind loading, and impact loading (where applicable), without failure including loss or glass breakage attributable to the following: defective manufacture, fabrication, and installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; and other defects in construction.
- B. Glass Design: Glass thicknesses indicated on Drawings are for detailing only. Confirm glass thicknesses by analyzing Project loads and in-service conditions. Provide glass lites for the various size openings in the thicknesses and strengths (annealed or heat-treated) to meet or exceed the following criteria:
1. Minimum glass thicknesses, nominally, of lites in exterior walls is 6.0 mm (0.23 inch).
 2. Minimum glass thicknesses of lites, whether composed of annealed or heat-treated glass, are selected to the worst-case probability of failure does not exceed the following:
 - a. 8 lites per 1000 for lites set vertically or not over 15 degrees of vertical and under wind action. Determine minimum thickness of monolithic annealed glass according to ASTM E 1300. For other than monolithic annealed glass, determine thickness per glass manufacturer's standard method of analysis including applying adjustment factors to ASTM E 1300 based on type of glass.

- C. Normal thermal movement results from the following maximum change (range) in ambient and surface temperatures acting on glass-framing members and glazing components. Base engineering calculation on materials' actual surface temperatures due to both solar heat gain and nighttime sky heat loss.

- 1. Temperature Change (Range): 120 deg F (67 deg C), ambient 180 deg F (100 deg C), material surfaces.

1.5 SUBMITTALS:

- A. General: Submit the following according to Conditions of Contract and Division 1 Specifications Sections.
- B. Product data for each glass product and glazing material indicated.
- C. Samples for verification purposes of 12-inch-square samples of each type of glass indicated except for clear monolithic glass products, and 12-inch-long samples of each color required (except black) for each type of sealant or gasket exposed to view. Install sealant or gasket sample between two strips of material representative in color of the adjoining framing system.
- D. Product certificates signed by glazing materials manufacturers certifying that their products comply with specified requirements.
 - 1. Separate certifications are not required for glazing materials bearing manufacturer's permanent labels designating type and thickness of glass, provided labels represent a quality control program of a recognized certification agency or independent testing agency acceptable to authorities having jurisdiction.
- E. Compatibility when adhesion test reports from sealant manufacturer indicating that glazing materials were tested for compatibility and adhesion with glazing sealants. Include sealant manufacturer's interpretation of test results relative to sealant performance and recommendations for primers and substrate preparation needed for adhesion..
- F. Compatibility test report from manufacturer of insulating glass edge sealant indicating that glass edge sealants were tested for compatibility with other glazing materials including sealants, glazing tape, gaskets, setting blocks, and edge blocks
- G. Product test reports for each type of glazing sealant and gasket indicated, evidencing compliance with requirements specified.
- H. Maintenance data for glass and other glazing materials to include in Operating and Maintenance Manual specified in Division 1.

1.6 QUALITY ASSURANCE:

- A. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below, except where more stringent requirements are indicated. Refer to these publications for glazing terms not otherwise defined in this Section or in referenced standards.
 - 1. FGMA Publications: "FGMA Glazing Manual".
 - 2. SIGMA Publications: TM-3000 "Vertical Glazing Guidelines".

- B. Fire-Resistive Glazing Products for Door Assemblies: Products identical to those tested per ASTM E 152, labeled and listed by UL or another testing and inspecting agency acceptable to authorities having jurisdiction.
- C. Fire-Resistive Glazing Products for Window Assemblies: Products identical to those tested per ASTM E 163, labeled and listed by UL or another testing and inspecting agency acceptable to authorities having jurisdiction.
- D. Insulating Glass Certification Program: Provide insulating glass units permanently marked either on spacers or at least one component lite of units with appropriate certification label of inspecting and testing agency indicated below:
 - 1. Insulating Glass Certification Council (IGCC).
- E. Glazier Qualifications: Engage an experienced glazier who has completed glazing similar in material, design, and extent to that indicated for Project with a record of successful in-service performance.
- F. Single-Source Responsibility for Glass: Obtain glass from one source for each product indicated below:
 - 1. Primary glass of each (ASTM C 1036) type and class indicated.
 - 2. Heat-treated glass of each (ASTM C 1048) condition indicated.
 - 3. Insulating glass of each construction indicated.
- G. Single-Source Responsibility for Glazing Accessories: Obtain glazing accessories from one source for each product and installation method indicated.
- H. Preconstruction Compatibility and Adhesion Testing: Submit to sealant manufacturers, samples of each glass, gasket, glazing accessory, and glass-framing member that will contact or affect glazing sealants for compatibility and adhesion testing as indicated below:
 - 1. Use test methods standard with sealant manufacturer to determine if priming and other specific preparation techniques are required for rapid, optimum glazing sealants adhesion to glass and glazing channel substrates.
 - a. Perform tests under normal environmental conditions during installation.
 - 2. Submit not less than nine pieces of each type and finish of glass-framing members and each type, glass, kind, condition, and form of glass (monolithic, insulating units) for adhesion testing, as well as one sample of each glazing accessory (gaskets, setting blocks and spacers) for compatibility testing,
 - 3. Schedule sufficient time to test and analyze results to prevent delay in the Work.
 - 4. Investigate materials failing compatibility or adhesion tests and get sealant manufacturer's written recommendations for corrective measures, including using special primers.
 - 5. Testing is not required when glazing sealant manufacturer can submit required preparation data that is acceptable to Architect and is based on previous testing of current sealant products for adhesion to and compatibility with submitted glazing materials.

1.7 DELIVERY, STORAGE, AND HANDLING:

- A. Protect glazing materials to comply with manufacturer's directions and as needed to prevent damage to glass and glazing materials from condensation, temperature changes, direct exposure to sun, or other causes.

1.8 PROJECT CONDITIONS:

- A. Environmental Conditions: Do not proceed with glazing when ambient and substrate temperature conditions are outside the limits permitted by glazing materials manufacturer or when glazing channel substrates are wet from rain, frost, condensation, or other causes.

1.9 WARRANTY:

- A. General: Warranties specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under requirements of the Contract Documents.
- B. Manufacturer's Warranty on Insulating Glass: Submit written warranty signed by manufacturer of insulating glass agreeing to furnish replacements for insulating glass units that deteriorate as defined in "Definitions" article, f.o.b. point manufacture, freight allowed Project site, within specified warranty period indicated below. Warranty covers only deterioration due to normal conditions of use and not handling, installing, protecting, and maintaining practices contrary to glass manufacturer's published instructions.
1. Warranty Period: Manufacturer's standard but not less than 10 years after date of Substantial Completion.

PART 2 – PRODUCTS

2.1 MANUFACTURERS:

- A. Products: Subject to compliance with requirements, provide one of the products specified in Product Data Sheets at end of this Section..

2.2 HEATED-TREATED FLOAT GLASS PRODUCTS, GENERAL:

- A. Fabrication Process: By vertical (tong-held) or horizontal (roller-hearth) process, at manufacturer's option, except provide horizontal process where indicated as tongless or free of tong marks.

2.3 HEAT-TREATED FLOAT GLASS:

- A. Uncoated, Clear, Heat-Treated Float Glass: ASTM C 1048, Condition A (uncoated surfaces), Type I (transparent glass, flat), Class 1 (clear), Quality q3 (glazing select), kind as indicated below.
1. Kind HS (heat strengthened) where indicated.
2. Provide Kind FT (fully tempered) at single lites, and at interior and outdoor lites of insulating units where safety glass is designated, or required by Section 2203 "Safety Glazing" of the BOCA National Building Code (1990) and BOCA Accumulative Supplement (1992).
- B. Coated, Clear, Heat-Treated Float Glass: ASTM C 1048, Condition C (other coated glass), Type I (transparent glass, flat), Class 1 (clear), Quality q3 (glazing select), with coating type and performance characteristics complying with requirements specified under coated glass products; kind as indicated below:
1. Kind HS (heat strengthened) where indicated.

2. Provide Kind FT (fully tempered) at single lites, and at interior and outdoor lites of insulating units where safety glass designated, or required by Section 2203 "Safety Glazing" of the BOCA National Building Code (1990) and BOCA Accumulative Supplement (1992).
- C. Manufacturers: Subject to compliance with requirements, provide heat-treated glass by one of the following companies
1. Falconer Glass Industries.
 2. Guardian Industries Corp.
 3. Libbey-Owens-Ford Co.
 4. PPG Industries, Inc.
 5. Viracon, Inc.

2.4 INSULATING GLASS

- A. Sealed Insulating Glass Units: Preassembled units consisting of organically sealed lites of glass separated by dehydrated air spaces complying with ASTM E 774 and with other requirements indicated, including those in Insulating Glass Product Data Sheet at the end of this Section.
1. For properties of individual glass lites making up units, refer to requirements specified elsewhere in this Section applicable to types, classes, kinds, and conditions of glass products comprising lites of insulating glass units.
 2. Provide heat-treated float glass of kind indicated or, if not otherwise indicated, Kind HS (heat strengthened) where recommended by manufacturer to comply with system performance requirements specified and Kind FT (fully tempered) where safety glass is designated or required.
 3. U-Values are expressed as Btu/hour x sq. ft. x deg F.

2.5 ELASTOMERIC GLAZING SEALANTS:

- A. General: Provide products of type indicated, complying with the following requirements:
1. Compatibility: Select glazing sealants and tapes of proven compatibility with other materials they will contact, including glass products, seals of insulating glass units, and glazing channel substrates, under conditions of installation and service, as demonstrated by testing and field experience.
 2. Suitability: Comply with sealant and glass manufacturer's recommendations for selecting glazing sealants and tapes that are suitable for applications indicated and conditions existing at time of installation.
 3. Colors: Provide color of exposed joint sealants to comply with the following:
 - a. Provide selections made by Architect from manufacturer's full range of standard colors for products of type indicated.
- B. Elastomeric Glazing Sealant Standard: Provide manufacturer's standard chemically curing, elastomeric sealants of base polymer indicated that comply with ASTM C 920 requirements indicated on each Elastomeric Glazing Sealant Product Data Sheet at the end of this Section, including those referencing ASTM classifications for Type, Grade, Class and Uses.

2.6 GLAZING GASKETS:

- A. Dense Compression Gaskets: Molded or extruded gaskets of material indicated below, complying with standards referenced with name of elastomer indicated below, and of profile and hardness required to maintain watertight seal:
 - 1. Neoprene, ASTM C 864.
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following companies:
 - 1. Preformed Gaskets:
 - a. Advanced Elastomer Systems, L.P.
 - b. Schnee-Morehead, Inc.
 - c. Tremco, Inc.

2.7 MISCELLANEOUS GLAZING MATERIALS:

- A. General: Provide products of material, size, and shape complying with referenced glazing standard, requirements of manufacturers of glass and other glazing materials involved for glazing application indicated, and with a proven record of compatibility with surfaces contacted in installation.
- B. Cleaners, Primers, and Sealers: Type recommended by sealant or gasket manufacturer.
- C. Setting Blocks: Elastomeric material with a Shore A durometer hardness of 85 plus or minus 5.
- D. Spacers: Elastomeric blocks or continuous extrusions with a Shore A durometer hardness required by glass manufacturer to maintain glass lites in place for installation indicated.
- E. Edge blocks: Elastomeric material of hardness needed to limit glass lateral movements (side-walking).

2.8 FABRICATION OF GLASS AND OTHER GLAZING PRODUCTS:

- A. Fabricate glass and other glazing products in sizes required to glaze openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with recommendations of product manufacturer and referenced glazing standard as required to comply with system performance requirements.

PART 3- EXECUTION

3.1 EXAMINATION:

- A. Examine glass framing, with glazier present, for compliance with the following:
 - 1. Manufacturing and installation tolerances, including those for size, squareness, offsets at corners.
 - 2. Presence and functioning of weep system.
 - 3. Minimum required face or edge clearances.
 - 4. Effective sealing between joints of glass-framing members.
- B. Do not proceed with glazing until unsatisfactory conditions have been corrected.

3.2 PREPARATION:

- A. Clean glazing channels and other framing members receiving glass immediately before glazing. Remove coatings that are not firmly bonded to substrates.

3.3 RAILING CONNECTIONS:

- A. Comply with combined recommendations of manufacturers of glass, sealants, gaskets, and other glazing materials, except where more stringent requirements are indicated including those in referenced glazing publications.
- B. Glazing channel dimensions as indicated on Drawings provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances. Adjusting as required by Project conditions during installation.
- C. Protect glass from edge damage during handling and installation as follows:
 - 1. Use a rolling block in rotating glass units to prevent damage to glass corners. Do not impact glass with metal framing. Use suction cups to shift glass units within openings; do not raise or drift glass with a pry bar. Rotate glass lites with flares or bevels on bottom horizontal edges so edges are located at top of opening, unless otherwise indicated by manufacturer's label.
 - 2. Remove damaged glass from Project site and legally dispose of off site. Damaged glass is glass with edge damage or other imperfections that , when installed, weaken glass and impair performance and appearance.
- D. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction sealant-substrate testing.
- E. Install elastomeric setting blocks in sill rabbets, sized and located to comply with referenced glazing standard, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.
- F. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.
- G. Provide spacers for glass sizes larger than 50 united inches (length plus height) as follows:
 - 1. Locate spacers inside, outside, and directly opposite each other. Install correct size and spacing to preserve required face clearances, except where gaskets and glazing tapes are used that have demonstrated ability to maintain required face clearances and comply with system performance requirements.
 - 2. Provide 1/8-inch minimum bite of spacers on glass and use thickness equal to sealant width. With glazing tape, use thickness slightly less than final compressed thickness of tape.
- H. Provide edge blocking to comply with requirements of referenced glazing publications, unless otherwise required by glass manufacturer.
- I. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.
- J. Where wedge-shaped gaskets are driven into one side of channel to pressurize sealant or gasket on opposite side, provide adequate anchorages so gasket cannot walk out when installation is subjected to movement.

- K. Square cut wedge-shaped gaskets at corners and install gaskets in manner recommended by gasket manufacturer to prevent corners from pulling away; seal corner joints and butt joints with sealant recommended by gasket manufacturer.

3.4 TAPE GLAZING:

- A. Position tapes on fixed stops so that when compressed by glass their exposed edges are flush with or protrude slightly above sightline of stops.
- B. Install tapes continuously but not in one continuous length. Do not stretch tapes to make them fit opening.
- C. Where framing joints are vertical, cover these joints by applying tapes to heads and sills first and then to jambs. Where framing joints are horizontal, cover these joints by applying tapes to jambs and then to heads and sills.
- D. Place joints in tapes at corners of openings with adjoining lengths butted together, not lapped. Seal joints in tapes with compliance sealant approved by tape manufacturer.
- E. Do not remove release paper from tape until just before each lite is installed.
- F. Center glass lites in openings on setting blocks and press firmly against tape by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings.

3.5 GASKET GLAZING (DRY):

- A. Fabricate compression gaskets in lengths recommended by gasket manufacturer to fit openings exactly, with stretch allowance during installation.
- B. Secure compression gaskets in place with joints located at corners to compress gaskets producing a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer.
- C. Install gaskets so they protrude past face of glazing stops.

3.6 SEALANT GLAZING (WET):

- A. Install continuous spacers between glass lites and glazing stops to maintain glass face clearances and to prevent sealant from extruding into glass channel weep systems until sealants cure. Secure spacers in place and in position to control depth of installed sealant relative to edge clearance for optimum sealant performance.
- B. Force sealants into glazing channels to eliminate voids and to ensure complete wetting or bond of sealant to glass and channel surfaces.
- C. Tool exposed surfaces of sealants to provide a substantial wash away from glass. Install pressurized gaskets to protrude slightly out of channel to eliminate dirt and moisture pockets.

3.7 PROTECTION AND CLEANING:

- A. Protect exterior glass from breakage immediately after installation by attaching crossed streamers to framing held away from glass. Do not apply markers to glass surface. Remove nonpermanent labels, and clean surfaces.

- B. Protect glass from contact with contaminating substances resulting from construction operations including weld splatter. If, despite such protection, contaminating substances do come into contact with glass, remove them immediately as recommended by glass manufacturer.
- C. Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction, but not less than once a month, for build-up of dirt, scum, alkali deposits, or stains, and remove as recommended by glass manufacturer.
- D. Remove and replace glass that is broken, chipped, cracked, abraded, or damaged in any way, including natural causes, accidents and vandalism, during construction period.
- E. Wash glass on both faces in each are of Project not more than 4 days prior to date scheduled for inspections that establish date of Substantial Completion. Wash glass as recommended by glass manufacturer.

INSULATING GLASS PRODUCT DATA SHEET #1

Classification of Units: Class C, CB, or CBA. Per ASTM E 774.

Air Space Width: 7/16" overall thickness

Gas Filling: Fill air space with argon, or manufacturers standard.

Sealing System: Dual seal, primary and secondary sealants: polyisobutylene and silicone.

Spacer Specifications: Aluminum with mill or clear-anodized finish.

Dessicant: Either molecular sieve or silica gel or blend of both.

Corner Construction: Manufacturer's standard corner construction.

Glass Specifications: Comply with the following requirements:

Thickness of Each Lite: 0.123 inch.

Uncoated Indoor Lite: Condition A (uncoated), Class 1 (clear) float glass.

Coated Clear Outdoor Lite: Condition C (other coated glass) float glass, Class 1 (clear) float glass.

Solar Reflective Coating: Pyrolytic on second surface.

Nominal Performance Characteristics are as indicated below:

Visible Light Transmittance: 75 %

Summer Daytime U-Value: 0.30

Winter Nighttime U-Value: 0.28

Product: Energy Advantage Low – E (2), Libbey-Owens-Ford Co.

ELASTOMERIC GLAZING SEALANT PRODUCT DATA SHEET

Base Polymer: Acid-curing silicone.

Type: S (single component).

Grade: NS (nonsag).

Class: 25.

Additional Movement Capability: 25 percent movement in extension and 25 percent in compression for a total of 50 percent movement.

Use [s] Related to Exposure: NT (nontraffic).

Uses Related to Glazing Substrates: M,G,A, and, as applicable to glazing substrates indicated, O.

Use O Glazing Substrates: aluminum, galvanized steel.

Acceptable Manufacturers:

Dow Corning Corporation
General Electric, Co., GE Silicones
Pecora Corporation
Sonneborn Building Products Division, ChemRex Inc.

END OF SECTION

NON-LOAD BEARING STEEL STUDS

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. Provide materials, labor, equipment and services necessary to install metal studs, tracks, runners, furring members, fasteners and steel grounds to receive screw-attached gypsum wallboard in non-load bearing interior construction assemblies.

1.2 RELATED SECTIONS

- A. Gypsum Board Assemblies: Section 09260

1.3 REFERENCES

- A. American Society for Testing and Materials (ASTM), latest editions.
 - C 645 Non-Load (Axial) Bearing Steel Studs, Runners (Track), and Rigid Furring Channels for Screw Application of Gypsum Board.
 - C 646 Steel Drill Screws for the Application of Gypsum Sheet Material to Light Gage Steel Studs.
 - C 754 Installation of Steel Framing Members to Receive Screw-Attached Gypsum Wallboard, Backing Board, or water-resistant Backing Board.
- B. Gypsum Association
 - GA-600 Fire Resistance Design Manual
- C. Underwriters Laboratories Inc. (UL).
 - Fire Resistance Directory.
- D. United States Gypsum Co.
 - Gypsum Construction Handbook

1.4 SUBMITTALS

- A. Product Data
 - Submit manufacturers' specifications for the products specified; metal studs and fasteners.
- B. Shop Drawings
 - Submit for approval-showing partitions fully dimensioned.
- C. Samples
 - 1. Submit samples of stud, track, shoes and furring channels in minimum 12" lengths for approval before any Work is commenced.
 - 2. Submit Fasteners: 10 each type.

D. Material Certificates

Submit certificates from the manufacturers of the specified materials stating compliance with the applicable requirements set forth for all materials specified in this Section.

1.5 QUALITY ASSURANCE

A. Qualifications

Installer is to be a firm with not less than five years of successful experience in the installation of specified materials.

B. Regulatory Requirements

1. Building Code: Work of this Section shall conform to all requirements of the NYC Building Code and all applicable regulations of other governmental authorities.
2. New York City Board of Standards and Appeals (BSA), or
3. New York City Materials Equipment Acceptance (MEA)
4. Fire Resistance Rating: Where ratings are indicated, match applicable assemblies tested per ASTM E 119 by Fire Testing Laboratories or to design designations in UL Fire Resistance Directory

C. Single Source Responsibility

Obtain all steel studs and accessories from a single manufacturer.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original packages, containers or bundles bearing brand name and identification of manufacturer.
- B. Store all materials inside under cover in a manner to keep them dry protected from weather, surface contamination, corrosion and damage from construction traffic and other causes.
- C. Handle studs and furring channels in a manner to prevent from being bent or mangled.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Provide materials from one of the following manufacturers:

1. Gold Bond Building Products Division; National Gypsum Co.
2. Milcor Division; Inryco Inc.
3. United States Gypsum Co.

2.2 MATERIALS

A. Steel Studs

In compliance with ASTM C 645, provide galvanized steel, C-shaped members as specified or shown on Drawings of sizes indicated below:

1. Stud depth: $2\frac{1}{2}$ " or $3\frac{5}{8}$ " as shown.
2. Stud thickness: 0.0329 inch min. thickness of base metal or 20 gage, unless otherwise indicated, for all wall framing members.
3. Stud thickness: 0.0454 inch min. thickness of base metal or 18 gage, unless otherwise indicated, for use at all framed openings, with double studs at each door jamb and as wall framing members in areas where tile backer board is specified.
4. Stud thickness: 0.0710 inch min. thickness of base metal or 14 gage, unless otherwise indicated, for use behind wall hung toilet partitions.

B. Runners

In compliance with ASTM C 645, provide galvanized steel runners to match applicable assembly specified, typically 0.0329 inch min. thickness of base metal or 20 gage to match wall framing members.

C. Furring Members

In compliance with ASTM C 645, provide galvanized cold rolled steel, 0.0239 inch min. thickness of base metal or 20 gage, $\frac{7}{8}$ " depth, screw type, hat shaped channels, where specified.

D. Steel Grounds

Provide 20 gage galvanized steel grounds, 8 inches wide by minimum 24" length for installation directly to steel studs to provide support for equipment and accessories indicated on Drawings.

E. Horizontal Bracing

In compliance with ASTM C 645; provide $\frac{3}{4}$ inch galvanized, cold rolled steel channels, fastened to inside of webs in a horizontal position, where indicated on Drawings.

F. Fasteners

Provide fasteners of type, size, style, grade and class required for secure installation of framing and furring. Galvanize all fasteners and accessories.

1. Standard Bolts and Nuts: ASTM A 307, Grade A, regular hexagon head.
2. Lag Bolts: FS FF-B-561, square head.
3. Machine Bolts: FS FF-B-584 head, FS FF-N-836 nuts
4. Machine Screws: FS FF-S-92, cadmium plated steel
5. Plain Washers: FS FF-W-92, round, general assembly grade, carbon steel.

6. Lock Washers: FS FF-W-84, helical spring type, carbon steel
7. Toggle Bolts; Tumble-wing type: FS FF-B-588, type, class and style as required to sustain load.
8. Self-Drilling Fasteners: No. 12-14 x 3/4 inch, hex washer head, self drilling fastener with pilot point.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Examine all Work prepared by others to receive Work of this Section and report any defects affecting installation to the Architect for correction. Commencement of Work will be construed as complete acceptance of preparatory Work by others.

3.2 INSTALLATION

A. General

Comply with ASTM C 754 and manufacturers specified installation instructions for all non-load bearing steel stud installations.

1. Extend all fire-rated partitions to underside of roof or floor construction. Brace laterally for stability as required.
2. Extend all non-fire-rated partitions minimum six inches above the installed ceiling height.
3. Brace all non-fire-rated partitions with diagonal steel studs in alternate directions every four (4) feet on center at right angles to partitions. Screw to top of partitions.

B. Steel Stud Installation

1. Where partitions abut ceiling or deck construction or vertical structural elements, provide slip or cushion type joint between metal framing and structure as recommended by manufacturer to prevent transfer of structural loads or movements to partitions, except as otherwise indicated.
2. Align tracks accurately at floor and ceiling. Secure runner tracks as recommended by the framing manufacturer for the upper and lower construction involved, except, do not exceed 24" on center spacing for power driven fasteners. Provide fasteners approximately 2" from corners and ends of tracks.
3. Position studs vertically and engage both floor and ceiling tracks. Space studs 16" on center unless otherwise indicated on the Drawings. Fasten studs to track flanges with screws.
 - a. Use full-length studs between tracks wherever possible. If necessary, splice studs with a minimum 8" nested lap and fasten with 2 screws per stud flange.
 - b. Provide additional studs to support inside corners at partition intersections, and to support outside corners and terminations of partitions (and both sides of control joints).

4. Frame openings other than door openings to comply with details shown and manufacturer instructions. Provide full length studs adjacent to jambs and horizontal header and sill tracks. Extend studs to underside of roof or floor construction above.
5. Provide two 18 gage studs at each doorjamb unless heavier gage studs are required by Drawings. Comply with stud manufacturer recommendations for the types of frames and weights of doors used in the project. Studs are to extend to underside of roof or floor construction above.
6. Construct fire rated partitions, vertical ductwork enclosures, column enclosures, etc. to meet or exceed the rating shown on the Drawings.

C. Furring Channel Installation

1. Attach hat-shaped metal furring channels to masonry or concrete surfaces; either vertically or horizontally, 16" on center and within 2" of interior corners unless otherwise indicated on Drawings. Attach furring with hammer-set or power driven fasteners through alternate flanges spaced 24" on center. Provide metal furring channel clips.

D. Running Channel Installation

Floor and ceiling running channels or stud tracks shall be 20 gage galvanized cold rolled steel with 1/2" legs to match gauge of studs specified in assembly. Securely fasten to floor, roof or vertical structural elements with 1/2" stud bolts or other method approved by manufacturer, spaced not more than 24" on center. Provide slip or cushion type joint between channel and structural elements as indicated in B, above.

E. Horizontal Bracing or Stiffener Installation

Install 3/4" steel furring channels fastened to inside of stud with webs in a horizontal position as indicated on Drawings. Space channels 6 feet on center minimum unless otherwise indicated.

F. Chase Wall Erection

1. Align two parallel rows of floor and ceiling runners spaced apart as detailed. Attach to concrete floor slabs with concrete stud nails or power-driven anchors 24" o.c. and to suspended ceilings with toggle or molly bolts 16" o.c.
2. Position steel studs vertically in runners, 16" o.c. with flanges in the same direction, and with studs on opposite sides of chase directly across from each other. Anchor all studs to floor and ceiling runner flanges with fastener tool.

3.3 **ADJUSTING**

A. Tolerances

Do not exceed 1/8" in 8 feet variation from plumb or level in any exposed line or surface, except at joints between planes or abutting edges or ends. Shim as required to comply with specified tolerances.

END OF SECTION

GYPSUM BOARD ASSEMBLIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Interior gypsum wallboard.
 - 2. Tile backing panels.
 - 3. Non-load bearing steel framing.
- B. Related Sections include the following:
 - 1. Division 6 Section "Rough Carpentry" for wood framing and furring.
 - 2. Division 7 Section "Building Insulation" for insulation and vapor retarders installed in gypsum board assemblies.

1.3 DEFINITIONS

- A. Gypsum Board Terminology: Refer to ASTM C 11 for definitions of terms for gypsum board assemblies not defined in this Section or in other referenced standards.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.

1.5 QUALITY ASSURANCE

- A. Fire-Test-Response Characteristics: For gypsum board assemblies with fire-resistance ratings, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing and inspecting agency acceptable to authorities having jurisdiction.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original packages, containers or bundles bearing brand name and identification of manufacturer.
- B. Store all materials inside under cover in a manner to keep them dry protected from weather, direct sunlight, surface contamination, corrosion and damage from construction traffic and other causes. Stack gypsum panels flat to prevent sagging.

1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Steel Framing and Furring:
 - a. MarinoWare; Division of Ware Ind.
 - b. National Gypsum Company.
 - c. Unimast, Inc.
 2. Gypsum Board and Related Products:
 - a. G-P Gypsum Corp.
 - b. National Gypsum Company
 - c. United States Gypsum Co.

2.2 STEEL PARTITION AND SOFFIT FRAMING

- A. Components, General: As follows:
1. Comply with ASTM C 754 for conditions indicated.
- B. Steel Studs and Runners: ASTM C 645.
1. Minimum Base Metal Thickness: 0.0312 inch.
 2. Depth: As indicated.
- C. Deep-Leg Deflection Track: ASTM C 645 top runner with 2-inch-deep flanges.
- D. Hat-Shaped, Rigid Furring Channels: ASTM C 645.
1. Minimum Base Metal Thickness: 0.0312 inch.
 2. Depth: 7/8 inch.
- E. Resilient Furring Channels: ½ inch-deep, steel sheet members.
1. Configuration: As indicated.
- F. Cold-Rolled Furring Channels: 0.0538-inch bare steel thickness, with minimum ½-inch-wide flange.
1. Depth: As indicated.
 2. Furring Brackets: Adjustable, corrugated-edge type of steel sheet with minimum bare steel thickness of 0.0312 inch.
 3. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.0625-inch-diameter wire, or double strand of 0.0475-inch-diameter wire.
- G. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.

2.3 INTERIOR GYPSUM WALLBOARD

- A. Panel Size: Provide in maximum lengths and widths available that will minimize joints in each area and correspond with support system indicated.
- B. Gypsum Wallboard: ASTM C 36.
 - 1. Type: X
 - 2. Thickness: 5/8 inch.
 - 3. Long Edges: Tapered.
- C. Sag-Resistant Gypsum Wallboard: ASTM C 36, manufactured to have more sag resistance than regular-type gypsum board.
 - 1. Type: X
 - 2. Thickness: 5/8 inch.
 - 3. Long Edges: Tapered.
 - 4. Location: Ceiling surfaces.

2.4 TILE BACKING PANELS

- A. Panel Size: Provide in maximum lengths and widths available that will minimize joints in each area and correspond with support system indicated.
- B. Water-Resistant Gypsum Backing Board: ASTM C 630/C 630M.
 - 1. Core: 5/8 inch, Type X.

2.5 TRIM ACCESSORIES

- A. Interior Trim: ASTM C 1047.
 - 1. Material: Galvanized or aluminum-coated steel sheet, rolled zinc, plastic, or paper-faced galvanized sheet.
 - 2. Shapes:
 - a. Cornerbead: Use at outside corners.
 - b. LC-Bead (J-Bead): Use at exposed panel edges.
 - c. L-Bead: Use where indicated.
 - d. U-Bead: Use where indicated.
 - e. Expansion (Control) Joint: Use where indicated.

2.6 JOINT TREATMENT MATERIALS

- A. General: Comply with ASTM C 475.
- B. Joint Tape:
 - 1. Interior Gypsum Wallboard: Paper.
 - 2. Tile Backing Panels: As recommended by panel manufacturer.
- C. Joint Compound for Interior Gypsum Wallboard: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.
 - 1. Prefilling: At open joints and damaged surface areas, use setting-type taping compound.
 - 2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use drying-type, all-purpose compound.

- a. Use setting-type compound for installing paper-faced metal trim accessories.
 - 3. Fill Coat: For second coat, use drying-type, all-purpose compound.
 - 4. Finish Coat: For third coat, use drying-type, all-purpose compound.
 - 5. Skim Coat: For final coat of Level 5 finish, use drying-type, all-purpose compound.
- D. Joint Compound for Tile Backing Panels:
- 1. Water-Resistant Gypsum Backing Board: Use setting-type taping and setting-type, sandable topping compounds.

2.7 ACOUSTICAL SEALANT

- A. Products: Subject to compliance with requirements, provide one of the following:
- 1. Acoustical Sealant for Exposed and Concealed Joints:
 - a. Pecora Corp.; AC-20 FTR Acoustical and Insulation Sealant.
 - b. United States Gypsum Co.; SHEETROCK Acoustical Sealant.
 - 2. Acoustical Sealant for Concealed Joints:
 - a. Ohio Sealants, Inc. ; Pro-Series SC-170 Rubber Base Sound Sealant.
 - b. Pecora Corp.; BA-98.
 - c. Tremco, Inc.; Tremco Acoustical Sealant.
- B. Acoustical Sealant for Exposed and Concealed Joints: Nonsag, paintable, nonstaining, latex sealant complying with ASTM C 834 that effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.

2.8 AUXILIARY MATERIALS

- A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.
- B. Fastening Adhesive:
- 1. Steel: Adhesive recommended for attaching panels to steel framing.
- C. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.
- 1. For fastening cementitious backer units, use screws of type and size recommended by panel manufacturer.
- D. Isolation Strip at Exterior Walls:
- 1. Foam Gasket: Adhesive-backed, closed-cell vinyl foam strips that allow fastener penetration without foam displacement, 1/8 inch thick, in width to suit steel stud size.
- E. Sound Attenuation Blankets: ASTM C 665, Type I (blankets without membrane facing)

produced by combining thermosetting resins with mineral fibers manufactured from glass, slag wool, or rock wool.

1. Fire-Resistance-Rated Assemblies: Comply with mineral-fiber requirements of assembly.
- F. Thermal Insulation: As specified in Division 7 Section "Building Insulation."
- G. Polyethylene Vapor Retarder: As specified in Division 7 Section "Building Insulation."

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames, cast-in anchors, and structural framing, for compliance with requirements and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Suspended Ceilings: Coordinate installation of ceiling suspension systems with installation of overhead structure to ensure that inserts and other provisions for anchorages to building structure have been installed to receive ceiling hangers at spacing required to support ceilings and that hangers will develop their full strength.
 1. Furnish inserts and other devices indicated to other trades for installation in advance of time needed for coordination and construction.

3.3 INSTALLING STEEL FRAMING, GENERAL

- A. Installation Standards: ASTM C 754, and ASTM C 840 requirements that apply to framing installation.
- B. Install supplementary framing, blocking, and bracing at terminations in gypsum board assemblies to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction. Comply with details indicated and with gypsum board manufacturer's written recommendations or, if none available, with United States Gypsum's "Gypsum Construction Handbook."
- C. Isolate steel framing from building structure at locations indicated to prevent transfer of loading imposed by structural movement.
 1. Isolate ceiling assemblies where they abut or are penetrated by building structure.
 2. Isolate partition framing and wall furring where it abuts structure, except at floor. Install slip-type joints at head of assemblies that avoid axial loading of assembly and laterally support assembly.
 - a. Use deep-leg deflection track where indicated.
- D. Do not bridge building control and expansion joints with steel framing or furring members. Frame both sides of joints independently.

3.4 INSTALLING STEEL SUSPENDED CEILING

- A. Suspend ceiling hangers from building structure as follows:
1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structural or ceiling suspension system. Splay hangers only where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
 2. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with the location of hangers required to support standard suspension system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards.
 3. Secure wire hangers by looping and wire-tying, either directly to structures or to inserts, eyescrews, or other devices and fasteners that are secure and appropriate for substrate, and in a manner that will not cause them to deteriorate or otherwise fail.
 4. Secure hangers to structure, including intermediate framing members, by attaching to inserts, eyescrews, or other devices and fasteners that are secure and appropriate for structure and hanger, and in a manner that will not cause hangers to deteriorate or otherwise fail.
 5. Do not connect or suspend steel framing from ducts, pipes, or conduit.
- B. Installation Tolerances: Install steel framing components for suspended ceilings so members for panel attachment are level to within 1/8 inch in 12 feet measured lengthwise on each member and transversely between parallel members.
- C. Sway-brace suspended steel framing with hangers used for support.
- D. Wire-tie or clip furring channels to supports, as required to comply with requirements for assemblies indicated.
- E. Install suspended steel framing components in sizes and spacings indicated, but not less than that required by the referenced steel framing and installation standards.
- F. Grid Suspension System: Attach perimeter wall track or angle where grid suspension system meets vertical surfaces. Mechanically joint main beam and cross-furring member to each other and butt-cut to fit into wall track.

3.5 INSTALLING STEEL PARTITION AND SOFFIT FRAMING

- A. Install tracks (runners) at floors, ceilings, and structural walls and columns where gypsum board assemblies abut other construction.
1. Where studs are installed directly against exterior walls, install isolation strip between studs and wall.
- B. Installation Tolerance: Install each steel framing and furring member so fastening surfaces vary not more than 1/8 inch from the plane formed by the faces of adjacent framing.
- C. Extend partition framing full height to structural supports or substrates above suspended ceilings, except where partitions are indicated to terminate at suspended ceilings. Continue framing over frames for doors and openings and frame around ducts penetrating partitions

above ceiling to provide support for gypsum board.

1. Cut studs $\frac{1}{2}$ inch short of full height to provide perimeter relief.
2. For partitions that extend to the underside of floor/roof slabs and decks or other continuous solid-structure surfaces to obtain ratings, install framing around structural and other members extending below floor/roof slabs and decks, as needed to support gypsum board closures and to make partitions continuous from floor to underside of solid structure.

- a. Terminate partition framing at suspended ceilings where indicated.

D. Install steel studs and furring at the following spacings:

1. Single-Layer Construction: 16 inches o.c., unless otherwise indicated.

E. Install steel studs so flanges point in the same direction and leading edge or end of each panel can be attached to open (unsupported) edges of stud flanges first.

F. Frame door openings to comply with GA-600 and with gypsum board manufacturer's applicable written recommendations, unless otherwise indicated. Screw vertical studs at jambs to jamb anchor clips on door frames; install runner track section (for cripple studs) at head and secure to jamb studs.

1. Single-Layer Construction: 16 inches o.c., unless otherwise indicated.

E. Install steel studs so flanges point in the same direction and leading edge or end of each panel can be attached to open (unsupported) edges of stud flanges first.

F. Frame door openings to comply with GA-600 and with gypsum board manufacturer's applicable written recommendations, unless otherwise indicated. Screw vertical studs at jambs to jamb anchor clips on door frames; install runner track section (for cripple studs) at head and secure to jamb studs.

1. Install two studs at each jamb, unless otherwise indicated.
2. Extend jamb studs through suspended ceilings and attach to underside of floor or roof structure above.

G. Frame openings other than door openings the same as required for door openings, unless otherwise indicated. Install framing below sills of openings to match framing required above door heads.

H. Polyethylene Vapor Retarder: Install to comply with requirements specified in Division 7 Section "Building Insulation."

3.6 **APPLYING AND FINISHING PANELS, GENERAL**

A. Gypsum Board Application and Finishing Standards: ASTM C 840 and GA-216.

B. Install sound attenuation blankets before installing gypsum panels, unless blankets are readily installed after panels have been installed on one side.

C. Install ceiling board panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in the central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.

- D. Install gypsum panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch of open space between panels. Do not force into place.
- E. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.
- F. Attach gypsum panels to steel studs so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.
- G. Attach gypsum panels to framing provided at opening and cutouts.
- H. Form control and expansion joints with space between edges of adjoining gypsum panels.
- I. Cover both faces of steel stud partition framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced internally.
 - 1. Fit gypsum panels around ducts, pipes, and conduits.
 - 2. Where partitions intersect open concrete coffers, concrete joists, and other structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by coffers, joists, and other structural members; allow 1/4- to 3/8- inch-wide joints to install sealant.
- J. Isolate perimeter of non-load-bearing gypsum board partitions at structural abutments, except floors. Provide 1/4- to 1/2- inch-wide spaces at these locations, and trim edges with U-bead edge trim where edges of gypsum panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.
- K. STC-Rated Assemblies: Seal construction at perimeters, behind control and expansion joints, and at openings and penetrations with a continuous bead of acoustical sealant. Install acoustical sealant at both faces of partitions at perimeters and through penetrations. Comply with ASTM C 919 and manufacturer's written recommendations for locating edge trim and closing off sound-flanking paths around or through gypsum board assemblies, including sealing partitions above acoustical ceilings.
- L. Space fasteners in gypsum panels according to referenced gypsum board application and finishing standard and manufacturer's written recommendations.
- M. Space fasteners in panels that are tile substrates a maximum of 8 inches o.c.

3.7 **PANEL APPLICATION METHODS**

- A. Single-Layer Application:
 - 1. On ceilings, apply gypsum panels before wall/partition board application to the greatest extent possible and at right angles to framing, unless otherwise indicated.
 - 2. On partitions/walls, apply gypsum panels horizontally (perpendicular to framing),

unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.

- a. Stagger abutting end joints not less than one framing member in alternate courses of board.
- B. Ceilings: Install panels perpendicular to supports, with end joints staggered and located over supports.
 - 1. Install with 1/4-inch open space where panels abut other construction or structural penetrations.
 - 2. Fasten with corrosion-resistant screws.
- C. Tile Backing Panels:
 - 1. Water-Resistant Gypsum Backing Board: Install at showers, tubs, and where indicated. Install with 1/4-inch gap where panels abut other construction or penetrations.

3.8 **INSTALLING TRIM ACCESSORIES**

- A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.
- B. Control Joints: Install control joints according to ASTM C 840 and in specific locations approved by Architect for visual effect.

3.9 **FINISHING GYPSUM BOARD ASSEMBLIES**

- A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.
- B. Prefill open joints and damaged surface areas.
- C. Apply joint tape over gypsum board joints, except those with trim having flanges not intended for tape.
- D. Gypsum Board Finish Levels: Finish panels to levels indicated below, according to ASTM C 840, for locations indicated:
 - 1. Level 1: Embed tape at joints in ceiling plenum areas, concealed areas, and where indicated, unless a higher level of finish is required for fire-resistance-rated assemblies and sound-rated assemblies.
 - 2. Level 4: Embed tape and apply separate first, fill, and finish coats of joint compound to tape, fasteners, and trim flanges at panel surfaces that will be exposed to view, unless otherwise indicated.

END OF SECTION

ACOUSTICAL CEILINGS

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. Provide acoustical ceiling Work as indicated on Drawings and as specified herein, including the following:
 - 1. Acoustical Mineral Fiber Tile and Panel Ceilings.
 - a. Lay-in panel installation - (exposed-grid)
 - 2. Indirect Exposed Suspension System

1.2 RELATED SECTIONS

- A. Divisions 15 and 16 Sections for related Mechanical and Electrical Work installed in ceilings.

1.3 REFERENCES

- A. American Society for Testing and Materials (ASTM), latest edition.
 - C 423 Test Method for Sound Absorption and Sound Absorption Coefficient for the Reverberation Room Method.
 - C 635 Metal Suspension System for Acoustical Tile and Lay-In Panel Ceilings.
 - C 636 Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels.
 - E 84 Surface Burning Characteristics of Building Materials.
 - E 119 Method for Fire Tests of Building Construction and Materials.
- B. Federal Specifications (FS)
 - SS-S-118B Sound Controlling (Acoustical) Tiles and Panels
- C. Underwriters Laboratories Inc. (UL)
 - Fire Resistance Directory.
- D. Acoustical and Insulation Materials Association, "Job Conditions".

1.4 DEFINITIONS

- A. Direct Suspension System
 - Directly fastened to floor or roof construction above, installed as part of the Work of Section 05170.
- B. Indirect Suspension System

Installed as part of the Work of this Section, as specified by ceiling system manufacturer to be attached to direct suspension system.

1.5 **SUBMITTALS**

A. Product Data

Submit manufacturer's product specifications and installation instructions for acoustical ceiling materials, indicating compliance with applicable regulations.

B. Shop Drawings

Submit shop-drawing details of reflected ceiling plans indicating mechanical, electrical and other Work above, penetrating or connected to acoustical ceiling. Indicate framing and support details for Work supported by the suspension system.

1. Scale: 1/4"=1'-0" required on Reflected Ceiling Plans.

C. Samples

1. Submit samples of the following materials, prior to installation;
 - a. Acoustical panels: 12"x12" samples of each type, pattern and color.
 - b. Exposed runners and moldings: 12" long samples of each color and system type required.

D. Certificates

Submit certificates from manufacturer of acoustical ceiling units and suspension systems attesting that their products comply with specified requirements.

1.6 **QUALITY ASSURANCE**

A. Qualifications

Installer is to be a firm with not less than five years of successful experience in the installation of specified materials.

B. Regulatory Requirements

1. Building Code: Work of this Section shall conform to all requirements of the Connecticut State Building Code and all applicable regulations of other governmental authorities.
2. Acoustical and Insulating Materials Association

C. Certifications

Furnish manufacturer's certification from an independent testing laboratory acceptable to authorities having jurisdiction, that acoustical tile units comply with fire test performance characteristics, including FS-S-SS-S118B.

D. Fire Performance Characteristics

Provide acoustical ceiling components that are identical to those tested for the following fire performance characteristics, according to ASTM test method indicated, by UL or other testing and inspecting agency acceptable to authorities having jurisdiction. Identify acoustical ceiling components with appropriate marking of applicable testing and inspecting agency.

Surface Burning Characteristics: Tested per ASTM E84

1. Flame Spread: 25 or less.
2. Smoke Developed: 25 or less.

E. Coordination of Work

Coordinate layout and installation of acoustical ceiling units and suspension system components with other work supported by, or penetrating through ceilings, including light fixtures, HVAC equipment, fire-suppression systems and partitions. Resolve all discrepancies and conflicts prior to start of Work.

F. Pre-installation Conference

Prior to start of Work, installer of acoustical system and representatives of trades involved are to have a conference at the job site, in the presence of the Owner's representative, to discuss coordination of ceiling system installation and resolve all discrepancies.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Delivery

Deliver all acoustical units in manufacturer's original, unopened packages fully identified with type, finish, performance data and compliance labeling.

B. Storage

1. Store materials where they will be protected against damage from moisture, direct sunlight, surface contamination or other causes.
2. Open ends of tile containers 24 hours prior to installation to stabilize moisture content and temperature.

C. Handling

Handle acoustical ceiling units carefully to avoid chipping edges or damaging units in any way.

1.8 PROJECT CONDITIONS

A. Space Enclosure

Do not install interior acoustical ceilings until space is enclosed and weatherproof, wet work in space is completed and nominally dry, work above ceilings is completed, and until air temperature and humidity will be maintained at values near those indicated for final occupancy.

1.9 GUARANTEE

- A. Work showing any of the following defects within the one year guarantee period specified in the Contract shall be corrected as directed by the Architect.
 - 1. Loose tiles or tiles improperly secured
 - 2. Tiles showing discoloration or cracking.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Armstrong World Industries – Match existing ceiling panels and grid.

2.2 MATERIALS - ACOUSTICAL TILES AND PANELS

- A. Mineral Fiber Tile and Panels
 - A. Acoustical Panel type 1 (AP-1):
 - Mfg: Armstrong World Industries
 - Type: Cirrus Beveled Tegal Edge, Match existing panels, provide hold down clips in Vestibule
 - Pattern #: 539
 - Color: White
 - Grid Face: 9/16"
 - Panel Size: 24" x 24" x 3/4" Thick

2.3 MATERIALS - METAL SUSPENSION SYSTEMS - INDIRECT HUNG

- A. Exposed Grid Suspension System
 - 1. AP-1:
 - Mfg: Armstrong
 - Type: Suprafine XL 9/16"
 - Color: White
 - 2. Structural Classification: Heavy-duty system in accordance with ASTM C 635.
 - 3. Main runners: Install to direct suspension system. Conform to ASTM C 635 for heavy-duty classification.
 - 4. Hold-Down Clips for Non-Fire-Rated Ceilings: For interior ceilings composed of lay-in panels, provide hold-down clips spaced 2'-0" o/c. on all cross tees.

2.4 MISCELLANEOUS MATERIALS

- A. Edge Moldings and Trim Pieces
 - Provide manufacturer's standard molding for edges and penetrations of ceiling units, which fit with type of edge detail and suspension system indicated.

B. Tile Fasteners

Cadmium plated, type recommended by tile manufacturer, but for not less than 1/2" penetration of substrate.

C. Drop Clips

18 gage galvanized steel with keyhole slot.

D. Wedges

Furnish and install wedges fabricated of 26 gage galvanized steel, size and dimensions indicated on Drawings.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine the building before beginning Work to determine that it is properly enclosed and the structure is in proper condition to receive acoustical materials and suspension system. Area shall be broom cleaned and uninterrupted for free movement of rolling scaffold. Do not proceed until satisfactory conditions prevail.
- B. Verify that direct suspension system has been installed properly, that main runners are spaced evenly and have been leveled to a tolerance of 1/8" in 12' measured both lengthwise on each runner and transversely between parallel runners so that indirect suspension system installation may proceed accurately.
- C. Start of Work constitutes acceptance of existing conditions, therefore, contractor is advised to bring any discrepancies to the attention of the Architect prior to start of Work.

3.2 PREPARATION

A. Coordination

Provide and coordinate the locations of inserts, clips, or other supports for support of acoustical ceilings.

- B. Measure each ceiling area and establish layout of acoustical units to balance border widths at opposite edges of each ceiling. Avoid use of less than half width units at borders and comply with approved shop drawings of reflected ceiling plans.

3.3 INSTALLATION - GENERAL

- A. Install materials in accordance with manufacturer's printed instructions and in compliance with ASTM C 636, governing regulations, fire resistance rating requirements, as indicated and
 - 1. Coordinate requirements for Work of other trades to be built into ceiling system. Provide supplementary framing as required.
- B. Arrange directionally patterned units (if any) in manner shown by reflected ceiling plans, or as approved by the Project Architect. Install in patterns indicated, (balanced borders all sided) symmetrical or centered about centerline or corridors, panels, fixtures, beam haunches, rooms, spaces.

- C. Cut as required for installation of electric fixtures, air diffusers, grilles, access doors, provided under other contracts. (Verify sizes and locations with other trades).
- D. On completion, the acoustic ceilings shall present a uniform plane surface, free from blemishes and imperfections.
- E. Install edge moldings of type indicated at perimeter of acoustical ceiling area and at locations where necessary to conceal edges of acoustical units.
 - 1. Sealant Bed: Apply continuous ribbon of acoustical sealant, concealed on back of vertical leg before installing moldings.
 - 2. Screw-attach moldings to substrate at intervals not over 16" o/c. and not more than 3" from ends, leveling with ceiling suspension system to tolerance of 1/8" in 12'-0". Miter corners accurately and connect securely.
- F. Install acoustical panels in coordination with suspension system with suspension members concealed by support of tile units. Scribe and cut panels to fit accurately at borders and penetrations.

3.4 CLEANING

- A. Clean exposed surfaces of acoustical ceilings, including trim, edge moldings, and suspension members; comply with manufacturer's instructions for cleaning and touch-up of minor finish damage.
- B. Remove and replace Work that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.
- C. Remove and replace Work that is damaged or soiled by other trades as directed by the Owner's Representative.

END OF SECTION

CARPETING

PART 1 – GENERAL

RELATED DOCUMENTS

Drawings and general provisions of contract, including General and Supplementary General Conditions and Division-1 Specification sections, apply to work of this section.

1.1 SECTION INCLUDES

- A. Scope of the Work.
- B. Contractor use of site and premises.
- C. Work Sequence.

1.2 SCOPE OF THE WORK

- A. The extent of carpet work is shown on Drawings/ Schedules. The work includes Carpet Tile, Modular Walk Off Tile, all accessories and adhesives as required for a finished installation.
- B. Carpet Manufacturers, styles and colors, shall be as noted in Drawings/ Schedules as shown and specified.
- C. Related Work Specified Elsewhere: Division 09400, Industrial Flooring Systems,

1.3 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced Installer who has successfully completed carpeting installations in material, design and extent to those indicated for Project. Installer shall thoroughly review Contract Documents and be familiar with structure and all necessary requirements for attachment to same.
- B. Fire Performance Characteristics: Provide carpeting that is identical to those tested for the following fire-performance characteristics, per ASTM test method indicated below, by UL or other testing and inspecting organizations acceptable to authorities having jurisdiction.
 - 1. Flame Resistance: Pass Methamine PU Test, DOC-FF1-70.
 - 2. Flooring Radiant Panel ASTM E-648-78: Critical Radiant Flux, greater than 0.45 watts per CM2.
 - 3. Smoke Chamber ASTM E-662-83: Less than 450.
- C. Coordination of Work: Coordinate layout and installation of carpeting with other construction.

1.4 SUBMITTALS

- A. Manufacturer's Data:

For information only, submit 2 copies of manufacturer's technical information and installation instructions for all materials required, except bulk materials. Include certifications and other data as may be required to show compliance with these specifications. Transmit a copy of each instruction to the Installer.

- B. Samples: Submit 3 sets of samples of same thickness and material for final unit of Work.
 - 1. Carpet Tile: Not less than 18" square as required.
 - 2. Carpet Transition Strips: Not less than 12" long.
 - 3. Maintenance Instructions, including recommended cleaning methods, cleaning solutions and stain removal methods.
- C. Maintenance Stock:
 - 1. After completion of work deliver replacement materials to the project site, as follows:
 - a. For each type and color of carpet tile and roll goods, color and type, not less than 5% of total carpeted area.
 - 2. Furnish replacement materials from same manufactured lot as material installed.
- D. Shop Drawings: Submit 3 sets of shop drawings. Shop drawing must contain the following information:
 - 1. Name of Job, general contractor, architect, installer.
 - 2. Building address.
 - 3. Scale
 - 4. Drawing for each area to be carpeted.
 - 5. Construction of sub floor for each area.
 - 6. Quantities of carpet needed for each area, including manufacturer installation sequencing.
 - 7. Exact notations where dye lot changes occur.
 - 8. Seam layout of each area.
 - 9. Carpet pile direction of each area.
 - 10. Name of manufacturer, style, backing system and color of carpet for each area.
 - 11. Location and type of expansion joints, and edge moldings.
 - 12. Type of wall base in each area.
- E. Maintenance Instructions, including recommended cleaning methods, cleaning solutions and stain removal methods.

1.5 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver packaged materials and store in original containers with seals unbroken and labels intact until time of use, in accordance with manufacturer's directions. Packaging shall contain manufacturer's name, product color and pattern name, identification and other related information. Store in a fully enclosed space where it will be protected against damage from moisture, direct sunlight, surface contamination and other causes.
- B. Carpet shall be stored between 40 and 100 degrees Fahrenheit and shall be conditioned to between 65 and 95 degrees Fahrenheit and the humidity between 10% and 65% for a minimum of 48 hours prior to the installation.

1.6 JOB CONDITIONS AND COORDINATION

- A. Space Enclosure: Do not install carpeting until space is enclosed and weather proof, wet-work in space is completed and nominally dry, painting and finish work is complete and work above ceilings is complete, tested, and approved. Maintain room temperature at a minimum of 65 and a maximum of 95 degrees Fahrenheit for a minimum of 48 hours

before, during and 72 hours after installation. The installation site must be acclimated with HVAC in operation.

1.7 WARRANTY

- A. Provide Certified Copies of the manufacturer's product warranties.
- B. Warranty shall be sole source responsibility of the manufacturer. Second Source warranties or warranties that involve parties other than the manufacturer are unacceptable.
- C. Warranties are official documents and shall not be issued on job sheets.

PART 2 - PRODUCTS

2.1 MODULAR CARPET TILE

- A. System Overview: Modular Carpet Tile (CPT-1)
 - 1. Manufacturer: Milliken
 - 2. Description: Tile squares
 - 3. Installation Method: Ashlar
 - 4. Style: Low Country, Water Way
 - 5. Color: WAT141-13, Sweet Grass
 - 6. Size: 25 CM x 1 M
 - 7. Face Fiber: Aquafil, Econyl Solution Dyed Nylon
 - 8. Dye Method: Solution Dyed
 - 9. Gauge: 1/12
 - 10. Stitches per inch: 10.4
 - 11. Pile Thickness: 0.08"
 - 12. Average Density: 6,598
 - 13. Tufted Yarn Weight: 15 oz/per square yard
 - 14. Standard Backing: PVC-Free Underscore ES Cushion
 - 16. Flammability: ASTM-E 648 flooring radiant panel: Class 1; ASTM-E-662 NBS smoke density: < 450.
 - 17. Electrostatic Propensity Test: <3.5 KV
 - 18. Soil/Stain Protection: Stain Smart
 - 19. Warranty: Lifetime Limited Modular Warranty
 - 20. Traffic Appearance Retention Rating: Severe traffic high use applications
 - 21. Indoor Air Quality-CRI Green Label Plus: GLP0793, Carpet Category 5Y
- B. Adhesive: Full Spread Method.
 - 1. Manufacturer: Milliken
 - 2. Description: Non-Reactive Standard Adhesive
 - 3. Spread rate: 35 to 40 Square Yards per Gallon
 - 4. Apply with a Long Nap (3/4 to 1") paint roller or a 1/32" x 1/32" x 1/16" notched trowel.

2.2 MODULAR WALK OFF TILE

- A. System Overview: Modular Walk off Tile (WOM-1)
 - 1. Manufacturer: Milliken
 - 2. Description: Tufted, Cut Pile
 - 3. Installation Method: Monolithic
 - 4. Style: Obex Cut X, Fizz

5. Color: FZX5-27, Grey
 6. Size: 50 CM x 50 CM (19.7"x19.7")
 7. Face Fiber: 100% Milliken certified Wear-on Type 6.6 Nylon
 8. Dye Method: Millitron
 9. Gauge: 5/32
 10. Stitches per inch: 9.5
 11. Finished Pile Height: 0.60"
 12. Average Density: 4684
 13. Tufted Yarn Weight: 15 oz/per square yard
 14. Standard Backing: PVC-Free Comfort Plus Cushion
 15. Flammability: ASTM-E 648 flooring radiant panel: Class 1; ASTM-. E-662 NBS smoke density: < 450.
 16. Electrostatic Propensity Test: <3.5 KV
 17. Soil/Stain Protection: Stain Smart
 18. Warranty: Lifetime Limited Modular Warranty
 19. Indoor Air Quality-CRI Green Label Plus: GLP0793, Carpet Category 5Y
- B. Adhesive: Full Spread Method.
5. Manufacturer: Milliken
 6. Description: Non-Reactive Standard Releasable Adhesive
 7. Spread rate: 35 to 40 Square Yards per Gallon
 8. Apply with a Long Nap (3/4 to 1") paint roller or a 1/32" x 1/32" x 1/16" notched trowel.

PART 3 - EXECUTION

3.1 INSPECTION:

- A. Installer must examine the substrate and conditions under which carpet is to be installed and notify the Contractor in writing of any conditions detrimental to the proper and timely completion of work. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the Installer.

3.2 PREPARATION, GENERAL:

- A. Carpet should be stored between 40 degrees Fahrenheit and 100 degrees Fahrenheit. And must be conditioned to between 60 degrees Fahrenheit and 90 degrees Fahrenheit.
- B. Clean floor of dust, dirt, solvents, oil, grease, plaster, paint and other substances detrimental to proper performance of adhesive and carpet. Allow floors to dry thoroughly. Floor temperature shall be a minimum of 60 degrees Fahrenheit for proper adhesive performance.
- C. Verify that floors are level, with a maximum variation of 1/4" in 10 feet, noncumulative. Use leveling compound where required. All holes and cracks to be patched using Portland Cement based patching compound such as W.W. Henry 547 Unipro, DAP "Webcrete 98", Mapei "PlaniPatch", or Ardex "Featherfinish". Patched areas will need to be primed with Prime coat of approved Primer. Gypsum based compounds are NOT recommended.
- D. Conduct a Bond Test:
1. Select an approximately 7 square foot area in a typical location on the slab.

2. Apply modular carpet adhesive to the substrate in the recommended manner and application rate. The adhesive should be allowed to dry completely prior to installation of modular carpet.
 3. Observe the drying time, which will vary with the floor porosity and ambient conditions. Properly dried adhesive will not transfer to the finger and will have a tacky feel.
 4. After placing the carpet tile on the dried adhesive, apply downward pressure to assure contact with the substrate. Tiles should be immediately locked in place inhibiting lateral movement.
 5. After 24 hours, observe the mock-up installation to see if any obvious problems may exist. The modular carpet should be adequately bonded to the substrate, and inhibit lateral movement with adhesive remaining firmly bonded to the substrate. To test this attempt to slide each tile. Now lift each carpet tile and check backing for adhesive transfer. All adhesive should remain on the floor. There should be no adhesive transfer to the back of the tile.
 6. Document with photos that show floor prep, floor with adhesive, and back of tile upon tile removal after 24 hour period.
- E. Floor Temperature should be 60 degrees Fahrenheit minimum for proper adhesive curing and performance.

3.3 **INSTALLATION:**

- A. General: Check matching of carpeting to verify there is no variation in dye lots. It is important to install modular tile in the order that they were manufactured. Typically, an installation will begin with the lowest carton number and progress through the highest numbers until the job is complete.
- B. Measure the area to be carpeted to determine the best starting positions. Chalk two lines that intersect these positions at right angles. Proper planning should avoid trimming perimeter tiles more than ½ their width.
- C. Starting in the corner of one quadrant, install tiles in a pyramid fashion. Install by butting edges together evenly, being careful not to compress modules. Always slide each module into position from the side to prevent trapped yarn. To ensure proper alignment, check spacing every 11 modules. Proper spacing should be within 1/8".
- D. Cut carpet where required in a manner to allow proper seam and pattern match. Ensure that cuts are straight, true and unfrayed. Never cut carpet over carpet as this can result in cutting of loops in lower carpet.
- E. Ensure that seams are straight, not overlapped or peaked and free of gaps.
- E. Cut and fit carpet neatly around projections from floor and to walls and other vertical surfaces.
- G. Do not place heavy objects or furniture on carpeting for a minimum of 24 hours or until adhesive is set.
- H. When installation is complete, roll entire job with a 75-100 lb roller.
- I. Install transition strips where carpeting terminates at other flooring. Use full-length pieces only. Butt tight to vertical surfaces.

3.4 CLEANING AND PROTECTION

- A. Remove any excess adhesive from floor, base, and wall surfaces without damage.
- B. Thoroughly clean carpeting per manufacturer's written instructions prior to Final acceptance by Owner.
- C. Carpet should be protected from heavy traffic and construction dust with a non- staining building material paper. Never use plastic sheeting as it will trap moisture inside and prevent proper curing of the adhesive.

END OF SECTION

PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A Scope: Provide labor, material, equipment, related services and supervision required for the application of multi-color wall finish and latex wall paint, as required for the complete performance of the work, and as shown on the Drawings and as herein specified.
- B Paint exposed surfaces, except where the paint schedules indicate that a surface or material is not to be painted or is to remain natural. If the paint schedules do not specifically mention an item or a surface, paint the item or surface the same as similar adjacent materials or surfaces whether or not schedules indicate colors.
- C Painting includes field painting of gypsum board, existing glazed block, Dur a Rock.
- D Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.
 - 1. Prefinished items include the following factory-finished components:
 - a. Architectural woodwork and casework.
 - b. Finished mechanical and electrical equipment.
 - c. Light fixtures.
 - d. Distribution cabinets.
 - 2. Concealed surfaces include walls or ceilings in the following generally inaccessible spaces:
 - a. Furred areas.
 - b. Ceiling plenums.
 - c. Pipe spaces.
 - d. Duct shafts.
 - 3. Finished metal surfaces include the following:
 - a. Anodized aluminum.
 - b. Stainless steel.
 - c. Chromium plate.
 - d. Copper.
 - e. Bronze and brass.
 - 4. Labels: Do not paint over Underwriters Laboratories (UL), Factory Mutual (FM), or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.
- E Related Sections include the following:

1. Division 9 Section "Gypsum Board Assemblies" for surface preparation for gypsum board.

1.3 DEFINITIONS

- A. General: Standard coating terms defined in ASTM D 16 apply to this Section.

1. Eggshell refers to low-sheen finish with a gloss range between 5 and 20 when measured at a 60-degree meter.
2. Satin refers to low-sheen finish with a gloss range between 15 and 35 when measured at a 60-degree meter.
3. Semigloss refers to medium-sheen finish with a gloss range between 30 and 65 when measured at a 60-degree meter.
4. Full gloss refers to high-sheen finish with a gloss range more than 65 when measured at a 60-degree meter.

1.4 SUBMITTALS

- A. Product Data: For each paint system specified. Include primers.

1. Material List: Provide an inclusive list of required coating materials. Indicate each material and cross-reference specific coating, finish system, and application. Identify each material by manufacturer's catalog number and general classification.
2. Manufacturer's Information: Provide manufacturer's technical information, including label analysis and instructions for handling, storing, and applying each coating material proposed for use.
3. Certification by the manufacturer that products supplied comply with local regulations controlling use of volatile organic compounds (VOCs).

- B. Samples for Verification: Of each color and material to be applied, with texture to simulate actual conditions, on representative Samples of the actual substrate.

1. Provide stepped Samples, defining each separate coat, including primers. Use representative colors when preparing Samples for review. Resubmit until required sheen, color, and texture are achieved.
2. Provide a list of materials and applications for each coat of each sample. Label each sample for location and application.
3. Submit Samples on the following substrates for the Architect's review of color and texture only:
 - a. Painted Gypsum Board or Dur a Rock: Provide two 12-inch square samples of each color and material on hardboard.

- C. Qualification Data: For firms and persons specified in the "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

1.5 QUALITY ASSURANCE

- A. Applicator Qualifications: Engage an experienced applicator who has completed painting system applications similar in material and extent to that indicated for this Project with a record of successful in-service performance.
- B. Source Limitations: Obtain block fillers, primers, and undercoat materials for each coating system from the same manufacturer as the finish coats.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to the Project Site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label, and the following information:
 - 1. Product name or title of material.
 - 2. Product description (generic classification or binder type).
 - 3. Manufacturer's stock number and date of manufacture.
 - 4. Contents by volume, for pigment and vehicle constituents.
 - 5. Thinning instructions.
 - 6. Application instructions.
 - 7. Color name and number.
 - 8. VOC content.
- B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F. Maintain containers used in storage in a clean condition, free of foreign materials and residue.
 - 1. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily. Take necessary measures to ensure that workers and work areas are protected from fire and health hazards resulting from handling, mixing, and application.

1.7 PROJECT CONDITIONS

- A. Apply water-based paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 50 and 85 deg F.

1.8 EXTRA MATERIALS

- A. Furnish extra paint materials from the same production run as the materials applied in the quantities described below. Package paint materials in unopened, factory-sealed containers for storage and identify with labels describing contents. Deliver extra materials to the Owner.
 - 1. Quantity: Furnish the Owner with an additional 5 percent, but not less than 1 gal. Or 1 case, as appropriate, of each material and color applied.

1.9 CLEANING MATERIALS AND EQUIPMENT

- A. Water for Cleaning: Clean, potable, free of oils, acids, alkalis, salts, and organic matter.
- B. Water Temperature: Water shall not exceed a temperature of 100 deg. F.
- C. Brushes: Fiber bristle only.

- D. Job-mixed Detergent Solution: Solution prepared by mixing 3 oz. Of trisodium phosphate (TSP), 1 oz. Of laundry detergent (Tide, All, etc.), 1 quart of 5 percent sodium hypochlorite (bleach), and 3 quarts of warm water for each gallon of solution required.

1.10 MANUFACTURERS

- A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products listed in the paint schedules.
- B. Manufacturers Names:
1. Master Coating Technologies (Zolotone)
 2. Benjamin Moore
 3. Sherwin Williams
 4. PPG Industries

1.11 PAINT MATERIALS

- A. Colors: Provide color selections made by the Architect.
1. Provide a water-based single component multi-color finish in a single can that shall be spray applied. Product shall meet or exceed applicable LEED standards, and shall meet or exceed valued indicated in the performance paragraph. Product shall contain anti- microbial product that shall fight mold and mildew build up on the dried paint film.
 2. Provide a water-based latex eggshell enamel finish, roller or brush applied. Product shall meet or exceed applicable LEED standards, and shall meet or exceed valued indicated in the performance paragraph. Product shall contain anti- microbial product that shall fight mold and mildew build up on the dried paint film.

PART 2 - EXECUTION

2.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with the Applicator present, under which painting will be performed for compliance with paint application requirements.
1. Do not begin to apply paint until unsatisfactory conditions have been corrected and surfaces receiving paint are thoroughly dry.
 2. Start of painting will be construed as the Applicator's acceptance of surfaces and conditions within a particular area.
- B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.

1. Notify the Architect about anticipated problems using the materials specified over substrates primed by others.

2.2 PREPARATION

- A. General: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted. If removal is impractical or impossible because of the size or weight of the item, provide surface-applied protection before surface preparation and painting.
 1. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.
- B. Cleaning: Before applying paint or other surface treatments, clean the substrates of substances that could impair the bond of the various coatings. Remove oil and grease before cleaning.
 1. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.
- C. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.
 1. Moisture Levels: No coating shall be applied when the moisture content exceeds 12 percent.
 2. Mildew shall be removed and neutralized.
 3. pH: pH of surface to be coated shall be under 10.
 4. Gypsum Board: Prepare surface to a Level 3 gypsum board finish. Use Acrylic joint compound. Sand smooth and flush with adjacent finishes. Prime with manufacturer's recommended stain blocker before general priming.
 5. Glazed Block: Clean thoroughly and scuff sand. Apply manufacturer's recommended primer.
 6. Apply as many primer coats as necessary to produce a white uniform substrate appearance. Allow individual coats to dry prior to application of subsequent coats.. Over gypsum board, back roll primer if airless applied.
 7. Sand primer with 100 grit or finer sandpaper. Remove dust.
- D. Materials Preparation: Mix and prepare paint materials according to manufacturer's written instructions.
 1. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
 2. Use only thinners approved by paint manufacturer and only within recommended limits.

2.3 APPLICATION

- A. General: Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.
- B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
 1. The number of coats and the film thickness required are the same regardless of application method. Do not apply succeeding coats until the previous coat has cured as recommended by the manufacturer. If sanding is required to produce a smooth, even surface according to manufacturer's written instructions, sand between applications.

2. Omit primer on metal surfaces that have been shop primed and touchup painted.
 3. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance. Give special attention to ensure edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
 4. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and where application of another coat of paint does not cause the undercoat to lift or lose adhesion.
- C. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.
1. Brushes: Use brushes best suited for the type of material applied. Use brush of appropriate size for the surface or item being painted.
 2. Rollers: Use rollers of carpet, velvet back, or high-pile sheep's wool as recommended by the manufacturer for the material and texture required.
 3. Spray Equipment: Use airless spray equipment with orifice size as recommended by the manufacturer for the material and texture required.
- D. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate. Provide the total dry film thickness of the entire system as recommended by the manufacturer.
- E. Prime Coats: Before applying finish coats, apply a prime coat of material, as recommended by the manufacturer, to material that is required to be painted or finished and that has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn through or other defects due to insufficient sealing.
- F. Pigmented (Opaque) Finishes: Completely cover surfaces as necessary to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.
- G. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not complying with requirements.

2.4 CLEANING

- A. Cleanup: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from the site.
1. After completing painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping. Be careful not to scratch or damage adjacent finished surfaces.

2.5 PROTECTION

- A. Protect work of other trades, whether being painted or not, against damage by painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by Architect.
- B. Provide "Wet Paint" signs to protect newly painted finishes. Remove temporary protective wrappings provided by others to protect their work after completing painting operations.

1. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA P1.

2.6 INTERIOR PAINT SCHEDULE

- A. Gypsum Board Soffits: Provide the following finish systems over interior gypsum board surfaces:
 1. Eggshell Finish Latex: 2 finish coats over a primer with a total dry film thickness not less than 3.0 mils, excluding primer coat.
 - a. Primer: Latex-based, interior primer applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.2 mils.
 - 1) Benjamin Moore: Sure Seal Latex Primer Sealer
 - 2) Sherwin Williams: Pro Cryl Universal Primer
 - 3) PPG: Speedhide 6-2 Primer
 - b. First and Second Coats: Eggshell, acrylic-latex, interior enamel applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 2.6 mils.
 - 1) Benjamin Moore: Regal Select Eggshell
 - 2) Sherwin Williams: Waterbourn Acrylic
 - 3) PPG: Speedhide 6-411 Topcoat
- B. Gypsum Board Walls and Glazed Block within Office 100: Provide the following finish systems:
 1. Gypsum Board :
 - a. Primer: SP203 Acrylic Drywall Primer (2 Coats) Master Coating Technologies.
 - b. Finish: "Polomyx" Master Coatings Technologies
 2. Glazed Block:
 - a. Primer: SP97 Multi-Purpose Waterbase Primer, Master Coatings Technologies.
 - b. Finish: "Polomyx" Master Coatings Technologies
- C. Gypsum Board Walls and Glazed Block in 101 Lobby and 102, Vestibule: Provide the following finish systems:
 1. Gypsum Board :
 - a. Primer: SP203 Acrylic Drywall Primer (2 Coats) Master Coating Technologies.
 - b. Finish: "Polomyx" Master Coatings Technologies
 - c. Clear Top Coat: Provide Clear Semi-Gloss Protective Top Coat
 2. Glazed Block:
 - a. Primer: SP97 Multi-Purpose Waterbase Primer, Master Coatings Technologies.
 - b. Finish: "Polomyx" Master Coatings Technologies
 - c. Clear Top Coat: Provide Clear Semi-gloss Protective Top Coat

END OF SECTION

RESILIENT FLOORING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Instructions to Bidders, AIA Document A201, "The General Conditions of the Contract for Construction," 15th Edition, 1997, the Supplementary General Conditions and Division 1, General Requirements, are a part of this Section and shall be binding on the Contractor and/or Subcontractor who performs this work. Note also all Addenda.

1.2 SUMMARY

- A. This Section includes Solid Vinyl Floor tile, Luxury Vinyl Tile, Resilient cove base and related Accessories.

1.3 RELATED SECTIONS

- A. Section 09680- Carpeting: Termination of edging of adjacent floor finish.
- B. Section 09600- Ceramic Tile: Termination of edging of adjacent floor finish.

1.4 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
 - 1. Product data for each type of product specified.
 - 2. Samples for verification purposes of each type of exposed finish required, prepared on samples of size indicated below and of same thickness and material indicated for final unit of Work. Where finishes involve normal color and texture variations, include sample sets showing full range of variations expected. Provide 3 sets of samples.
 - a. Full size 16" x 16" sample of each color Solid Vinyl tile specified. Sample shall be clearly marked with manufacturer, style and color.
 - b. Full size plank of Luxury Vinyl Tile,
 - c. 12" length sample of rubber base.
 - b. 12" length sample of transition strips.
 - 3. Submit maintenance data including cleaning methods, recommended cleaning solutions and stain removal methods.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced Installer who has successfully completed resilient flooring installations similar in material, design, and extent to those indicated for Project. Installer shall thoroughly review Contract Documents and be familiar with structure and all necessary requirements for attachment to same.
- B. Single-Source Responsibility for Resilient Tile: Obtain each type of resilient tile from a single source with resources to provide products of consistent quality in appearance and physical properties without delaying progress of the Work.
- C. Coordination of Work: Coordinate layout and installation of resilient tile with other construction that penetrates walls or floors.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver Resilient Tile and accessories to project site in original, unopened packages and store them in a fully enclosed space where they will be protected against damage from moisture, direct sunlight, surface contamination, and other causes. Store on a smooth floor. Stack no more than five (5) cartons high. Pallets shall not be double stacked. Keep Materials and installation site at a minimum of 65 degrees F or more than 85 degrees F for 48 hours before, during and after installation.
- B. Protect adhesives from freezing or overheating in accordance with manufacturer's instructions.
- C. Handle Resilient Vinyl tile and accessories carefully to avoid chipping edges or damaging units in any way.

1.7 PROJECT CONDITIONS

- A. Space Enclosure: Do not install Resilient Vinyl tile and accessories until space is enclosed. Maintain minimum 65 degrees F air temperature at flooring installation area for 48 hours prior to, during and for 48 hours after installation.
- B. Maintain the ambient relative humidity between 40% and 60% during installation.
- B. Prepare substrates according to ASTM F710.
 - 1. Concrete floors must be free of dust, solvent, paint, wax, oil, grease, residual adhesive, adhesive removers, film- forming curing compounds, silicate penetrating curing compounds, sealing, hardening or parting compounds, alkaline salts, excessive carbonation or laitance, mold, mildew and other foreign materials that may affect dissipation rate of moisture from the concrete, discoloration or adhesive bonding.
 - 2. Mechanically remove contamination of the substrate that may cause damage to the resilient flooring. Permanent and non -permanent markers, pens, crayons, paint must not be used to write on the back of the flooring material or used to mark the substrate as they could bleed through and stain the floor.
 - 3. Perform moisture testing as recommended by manufacturer. Proceed with installation only after substrates have been tested and meet the minimum requirement from the manufacturer in accordance with ASTM F1869 Standard Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride or ASTM F2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in Situ Probes.
 - 4. A pH Test for alkalinity must be conducted on the concrete floor prior to installation with results between 7 and 9. If the test results are not within the acceptable range, the installation should not proceed until the problem has been corrected.
 - 5. Fill cracks, holes, depressions and irregularities in the substrate with good quality Portland Cement based underlayment leveling and patching compound and remove bumps and ridges to produce a uniform and smooth surface.
 - 6. Floor covering shall not be installed over expansion joints.

7. Sweep and vacuum clean substrates to be covered with resilient products immediately before installation.

1.8 EXTRA MATERIALS

- A. Deliver extra materials to Owner. Furnish extra materials described below that match products installed, are packaged with protective covering for storage, and are identified with appropriate labels.

1. Furnish quantity of full-size units equal to 2.0 percent of amount installed.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Solid Vinyl Tile: Subject to compliance with requirements, provide the following:
 1. SVT-1:
 - a. Manufacturer: Tarkett
 - b. Color: CG516, Sea Spray
 - c. Type: Cortina Grande Colors
 - d. Size: 16"x 16" x 0.125"
 - e. Installation: Monolithic
 - f. Fire Resistance: ASTM E662, Smoke Density- Less than 450
Critical Radiant Flux: ASTM E648:< 1.0 watts per sq Centimeter
 - g. Static Load Limit: 800 psi
 - h. Slip Resistance: ADA Compliant. <0.6 COF
 - i. Adhesive: Tarkett 959 Vinyl Tile and Plank Adhesive or 901 Spray Smart adhesive or per manufacturer's recommendations.

2.2 FLOORING ACCESSORIES

- A. Wheeled Traffic Transition (SVT to CPT-1)
 1. Manufacturer: Johnsonite
 2. Style: CTA-18-HT
 3. Color: TBD
 4. Size: 2-1/2" Wide
- B. Wheeled Traffic Transition (SVT to WOM-1)
 1. Manufacturer: Johnsonite
 2. Style: CTA-18-K
 3. Color: TBD
 4. Size: 2-1/2" Wide
- C. Rubber Base:
 1. RB-1:
 - a. Manufacturer: Johnsonite
 - b. Height: 4" coved
 - c. Thickness: 1/8"
 - d. Type: Dura-Cove Rubber Wall Base at Resilient

- e. Color: Black
 - f. Adhesive: #960 Solvent Free, Environmentally Safe Acrylic Cove Base
2. RB-2:
- a. Manufacturer: Johnsonite
 - b. Height: 6" coved
 - c. Thickness: 1/8"
 - d. Type: Dura-Cove Rubber Wall Base at Resilient
 - e. Color: Black
 - f. Adhesive: #960 Solvent Free, Environmentally Safe Acrylic Cove Base

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and sub floor to which Resilient vinyl tile and base attaches or abuts, with Installer present, for compliance with requirements specified in this and other sections that affect installation and anchorage of resilient flooring. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Remove all sub-floor ridges and bumps. Fill low spots, cracks, joints, holes and other defects with sub-floor filler.
- B. Clean floor and apply trowel and float filler to leave smooth, flat, hard surface. Prohibit traffic until filler is cured.
- C. Floors shall be flat with a maximum variation of 1/8 inch in 10 feet.

3.3 INSTALLATION- SOLID VINYL TILE

- A. General: Installation shall be as recommended by manufacturer.
- B. Install on porous surface.
- C. Fit joints tight and vertical. Use as long lengths as is practicable. Miter internal corners. Use pre-formed outside corners.
- D. Scribe to fit to doorframes and other obstructions.
- E. Install straight and level to variation of 1/8 inch over 10 feet.

3.6 INSTALLATION- ACCESSORIES

- A. General: Installation shall be as recommended by manufacturer.
- B. Install on porous surface.
- C. Fit joints tight and vertical. Use as long lengths as is practicable.
- D. Scribe to fit to obstructions.
- E. Install straight and level to variation of 1/8 inch over 10 feet.

3.7 CLEANING AND PROTECTION

- A. Do not wash or scrub the floor for at least 4 to 5 days after installation to allow the floor tiles to bond to the sub floor.
- B. Keep heavy equipment and furniture off of the floor for at least 48 hours to allow the adhesive to set.
- C. Sweep or vacuum thoroughly and remove any residue.
- D. Solid Vinyl Tile: Apply a minimum of 2 coats of a high quality cross-linked acrylic floor polish to temporarily protect the floor until regular maintenance procedures can begin.
- E. Luxury Vinyl Tile: Sweep or vacuum to remove loose dirt. Wash Floor with a neutral floor cleaner. Rinse the floor with clean water and wet vacuum or mop dry. Rinse thoroughly.

END OF SECTION

SIGNAGE

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes the following types of signs:
 - 1. Panel signs.
- B. Related Sections: The following Sections contain requirements that relate to this Section:

1.03 SUBMITTALS

- A. General: Submit the following according to the Conditions of the Contract and Division 1 Specification Sections.
- B. Product data for each type of sign specified, including details of construction relative to materials, dimensions of individual components, profiles, and finishes.
- C. Shop drawings showing fabrication and erection of signs. Include plans, elevations, and large-scale sections of typical members and other components. Show anchors, grounds, layout, reinforcement, accessories, and installation details.
 - 1. Provide message list for each sign required, including large-scale details of wording and lettering layout.
 - 2. For signs supported by or anchored to permanent construction, provide setting drawings, templates, and directions for installation of anchor bolts and other anchors to be installed as a unit of Work in other Sections.
 - 3. Templates: Furnish full-size spacing templates for individually mounted dimensional letters.
 - 4. Furnish full-size computer generated graphic for metal plaque.
- D. Samples: Provide the following samples of each sign component for initial selection of color, pattern and surface texture as required and for verification of compliance with requirements indicated.
 - 1. Samples for initial selection of color, pattern, and texture:
 - 2. Panel Sign: For final verification of color, pattern, texture, lettering, graphic images, and other graphic devices, submit full-size sample of a panel sign specified in this Section.
- E. All submittals will be to and on request from the Architect.

1.04 QUALITY ASSURANCE

- A. Sign Fabricator Qualifications: Firm experienced in producing signs similar to those indicated for this Project, with a record of successful in-service performance, and sufficient production capacity to produce sign units required without causing delay in the Work.

- B. Single-Source Responsibility: For each separate sign type required, obtain signs from one source of a single manufacturer.

1.05 PROJECT CONDITIONS

- A. Field Measurements: Take field measurements prior to preparation of shop drawings and fabrication to ensure proper fitting. Show recorded measurements on final shop drawings. Coordinate fabrication schedule with construction progress to avoid delay.

1.06 WARRANTY

- A. Project Warranty: Comply with requirements of Division 1.
- B. Warranty Period: One year from product ship date. Warranty specifically excludes letter mounting substrate

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. ASI Sign Systems, Inc.
 - 2. The Supersine Company.
 - 3. EMED Company, Inc.
 - 4. Seton Company, Inc.

2.02 MATERIALS

- A. Mounting Height: 60 inches above finished floor, unless otherwise noted for interior signs.

2.03 PANEL SIGNS, GENERAL

- A. Panel Signs: Comply with requirements indicated for materials, thicknesses, finishes, colors, designs, shapes, sizes, and details of construction.
 - 1. Produce smooth, even, level sign panel surfaces, constructed to remain flat under installed conditions within a tolerance of plus or minus 1/16 inch measured diagonally.
- B. Raised Sign copy: Raise copy 1/32-inch from plaque surface by manufacturer's photomechanical stratification processes. Uniformly opaque, precisely formed graphics shall comply with applicable ADA regulations including size, style, spacing, content, position, and colors.

2.04 PANEL SIGNS

- A. Unframed Panel Signs: Raised (tactile) room plaques shall be die-raised aluminum plate, 0.102 inches thick by 3-1/2 inches high, by length to fit copy. Lettering to be 1-inch high Helvetica Medium. Letters and numbers to have a width-to-height ratio between 3:5 and 1:1 and a stroke width-to-height ratio between 1:5 and 1:10. All signs shall have braille equivalent.
- B. All building entries which are handicapped accessible shall be clearly identified with the international symbol of accessibility for the physically handicapped in accordance with

Section 4:28 of ANSI A117.1.

- C. All rooms shall be identified with raised letters and numbers. Such identification shall be placed on the wall adjacent to the latch side of the door or on the doors as directed by the Architect at a height of 60 inches above the floor or as near thereto as possible.

1. Fasteners: Tamper-proof, stainless steel screws and silicone.

2.05 FINISHES

- A. Colors and Surface Textures: For exposed sign material that requires selection of materials with integral or applied colors, surface textures or other characteristics related to appearance, provide color matches indicated, or if not indicated, as selected by the Architect from the manufacturer's standards.
- B. Metal Finishes: comply with NAAMM "Metal Finishes Manual" for finish designations and applications recommendations. Plaque is bronze with raised letters.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. General: Locate sign units and accessories where indicated by the Architect, using mounting methods of the type described and in compliance with the manufacturer's instructions.
1. Install signs level, plumb, and at the height indicated, with sign surfaces free from distortion or other defects in appearance.
- B. Wall-Mounted Panel Signs: Attach panel signs to wall surfaces using the methods indicated below:
1. Tamper-proof Screws and Silicone-Adhesive Mounting: Use liquid silicone adhesive recommended by the sign manufacturer to attach sign units to irregular, porous, or vinyl-covered surfaces. Use countersunk stainless steel tamper-proof screws and shields where required.

3.02 CLEANING AND PROTECTION

- A. After installation, clean soiled sign surfaces according to the manufacturer's instructions. Protect units from damage until acceptance by Architect.
- B. Repair scratches and other damage, which might have occurred during installation. Replace components where repairs were made but are still visible to the unaided eye from a distance of 10 feet.

3.03 SIGNAGE SCHEDULE

- a. **PANEL SIGNS – Provide the following signs and respective quantities. Locations indicated by door number:**

1)	SIGN	QUANTITY	LOCATION
	Main Office	2	101, 102

Note: Provide handicap signage where required.

END OF SECTION